

# FLIGHT

The  
AIRCRAFT ENGINEER  
AND AIRSHIPS

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## DIARY OF CURRENT AND FORTHCOMING EVENTS

Club Secretaries and others desirous of announcing the dates of important fixtures are invited to send particulars for inclusion in this list:—

- 1931
- Aug. 22. Northants. Flying Party at Horsey Toll.
- Aug. 22. Newcastle-on-Tyne Air Pageant, Cramlington.
- Aug. 29. Flying Meeting at Yarmouth.
- Aug. 29. Gliding Meeting at Portsdown Hill.
- Aug. 29-Sept. 5. Boulogne Air Week.
- Aug. 29-Sept. 7. U.S. National Air Races, Cleveland, Ohio.
- Sept. 2. Exhibition of Aerodrome Lighting at Croydon Aerodrome.
- Sept. 5. Norfolk and Norwich Ae.C. Display at Yarmouth.
- Sept. 5. Haldon Flying Meeting.
- Sept. 12. Schneider Trophy Contest.
- Sept. 16. "Development of Aircraft Manufacturing," Wilbur Wright Memorial Lecture, by Glenn L. Martin, before R.Ae.S.
- Sept. 19. All-Women's Aviation Meeting at Northamptonshire Ae.C., Sywell.
- Sept. 23-Oct. 11. French Two-Seater Light 'Plane Competition.
- Sept. 26. Garden Party, Bristol and Wessex Ae.C.
- Oct. 4-5. International Gliding Competition, Balsaean, Sussex.
- Oct. 8. Balloon Ascent, Lecture by Prof. Piccard before R.Ae.S.
- Oct. 15. "Protection of Metals in Aircraft Construction," Lecture by H. Sutton before R.Ae.S.
- Oct. 29. "Accidents in Civil Aviation," Lecture by Capt. A. G. Lamplugh before R.Ae.S.
- Nov. 5. "Safety in Spinning," Lecture by H. B. Irving before R.Ae.S.
- Nov. 19. "Aircraft Vibration," Lecture by H. Constant before R.Ae.S.
- Dec. 3. "Wheel Brakes and Undercarriages," Lecture by S. Scott Hall before R.Ae.S.
- Dec. 10. "Air Flow—Demonstrations on the Screen by Means of Smoke," Lecture by W. S. Farren before R.Ae.S.
- Dec. 17. "Control Beyond the Stall," Lecture by Dr. G. V. Lachmann before R.Ae.S.

## EDITORIAL COMMENT



### The Auxiliary Air Force

AN Auxiliary Air Force squadron is the subject of an article on another page in this issue. In all military organisations one unit will differ from another in keenness and efficiency, but in a force which is raised and maintained on a voluntary and unpaid basis the variations between one unit and another are likely to be more acute than they are in a regular, professional force. The squadron which was visited by our special correspondent is one of the London squadrons, actually the City of London Bomber Squadron, and it naturally has features peculiar to itself. One particularly interesting feature of this squadron is that it draws its airmen from those engaged in City offices instead of from mechanics working in the shops which are to be found in every great town. The squadron finds that the high standard of education and intelligence of this class compensates for its lack of mechanical training and experience, and that the men quickly learn enough in the squadron to enable them to keep their aeroplanes and engines in first-class flying condition. Other squadrons recruit from among the trained mechanics of their districts, and doubtless get equally good results. Opportunity has not yet offered for us to visit all the A.A.F. squadrons. We feel assured that we should find that the differences in efficiency between them are only minor.

The force as a whole is a splendid example of the good value which Great Britain can get for a very small expenditure of money out of men who give their services free to aid in the defence of the country. Our special correspondent, writing with considerable experience of voluntary national service, has formed the impression that very seldom, if ever, has an unpaid force given better value to the country than is given by the Auxiliary Air Force. The pitch of training at which the best squadrons have arrived is such that they could be sent at the very shortest notice on active service with the utmost confidence. We know that they can fly in good formation, that the pilots are men of ability and experience in the air, and that they can find their way to an objective

with a sureness not inferior to that of a regular bomber squadron. So far as target practice is a criterion, and it is the only criterion by which even the regulars can be judged, we can trust the Auxiliary squadrons to drop their bombs with accuracy, and to shoot straight at any enemy formations which attempted to intercept them. Of the "stuff" which is in the men there is, of course, no doubt whatever. There was once a foolish impression abroad that only members of regular fighting services would display steadfast courage when under fire. The great war speedily dispelled that illusion. Our great army in 1918 was almost entirely composed of civilians, and our great air force at the same time was entirely so composed. The British fighting spirit is found in all classes and all callings of the people.

When considering the place of amateur airmen in the scheme of national defence, the Cadre or Special Reserve squadrons should be classed with the units of the Auxiliary Air Force. In the former the officers are about half regulars and half Special Reserve, the commanding officer being a regular. In the latter all the officers are auxiliaries except the adjutant and the assistant adjutant. Both classes of squadrons, however, provide openings for civilians to take part in the air defence of the country. One would like to see every large town provided with a squadron of one or other of these classes. There are 13 squadrons in all in No. 1 Air Defence Group. The present location of the squadrons is as follows. London has three, Birmingham, Glasgow, Belfast, Bristol, Nottingham, Durham and Edinburgh have one each, while three other squadrons draw their men from the counties of Lincoln, Kent, and the North Riding. Several of the squadrons are named after counties, but obviously depend chiefly on the chief town of the county. The backwardness of the North of England is noticeable in this geographical list, for the Durham and North Riding squadrons are still in their infancy, and as yet there is no squadron in Lancashire. No one can cast any doubts on the air-mindedness of Manchester and Liverpool, and so the absence of any squadron in the whole county of Lancashire is quite remarkable.

We frequently receive letters from young men in the North-West of England who are anxious to serve their country in the air and who inquire which is the nearest Auxiliary squadron which they can join. It is depressing to have to inform them that there is no such squadron in their part of the world. Yorkshire now has a newly formed squadron, and Yorkshire is not far away from Lancashire. But the Territorial County Associations which raise the Auxiliary squadrons depend largely on local patriotism as a lever in raising recruits. It is notorious that the age-long friendly rivalry between the counties of the Red Rose and the White Rose is still very strong, and a Lancashire lad would not feel very enthusiastic about joining a Yorkshire unit. Belfast is also not very far away from his home, but a nasty stretch of water lies between, and steamer passages cost money. There really seems no obvious outlet for the patriotism of the Lancashire airman.

The Midlands, a great industrial area, can boast two squadrons; but surely that is not enough. Leicester strikes us as a city which ought to support a squadron, for it is a city which has won eminence in air matters. Other places might also be mentioned.

The expansion of the Air Defence of Great Britain, to which all the Special Reserve and Auxiliary squadrons belong, is taking place very slowly. Economy has dictated this slow rate of progress, and economy seems likely to become a still more biting nuisance in the near future. Still, expansion is taking place, and no form of expansion is more economical than the formation of A.A.F. squadrons. We believe that if a city or county approaches the Air Ministry, and urges that it is able and willing to raise and maintain an air squadron, it is usually met with enthusiastic sympathy. Why both Manchester and Liverpool have not firmly demanded squadrons is one of the mysteries of our time. It is a novelty for Lancashire to be led by London, by the South in general, and by those fellows on the other side of the Pennine range. We put it to the men of Lancashire that to win the county cricket championship is not more honourable than to win the Esher Trophy for the best Auxiliary Air Force squadron. We shall look for a response.

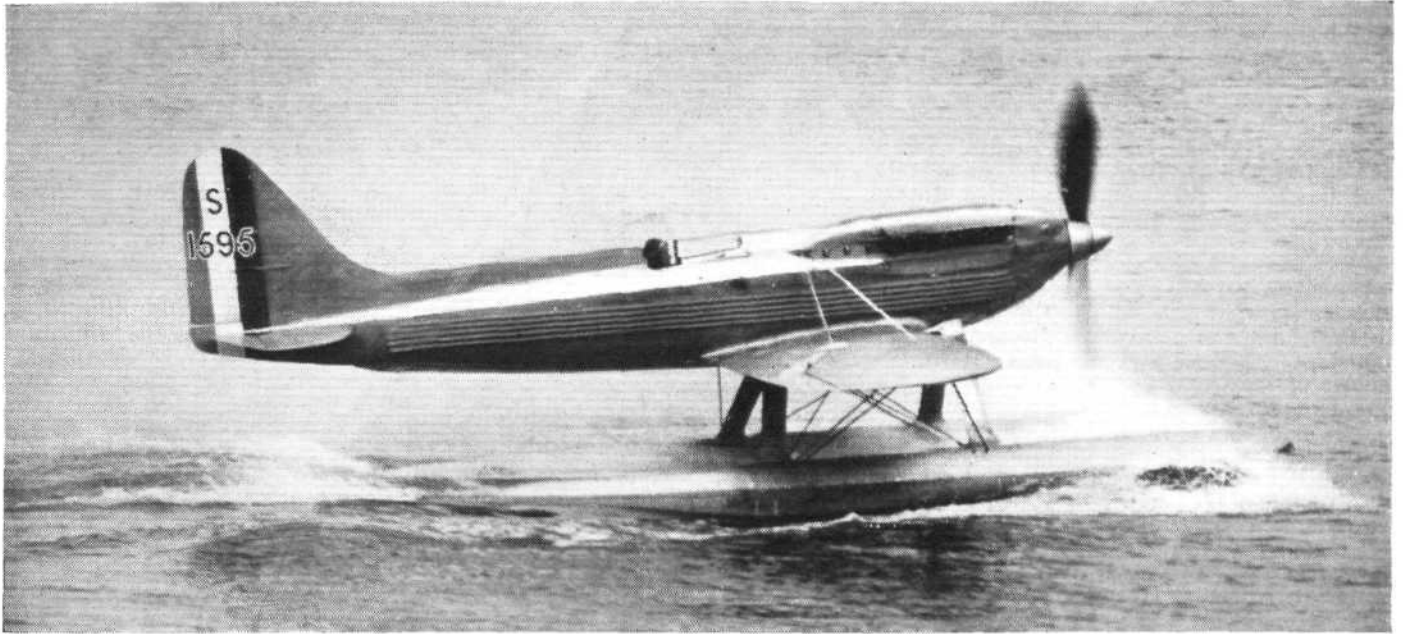
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On Tuesday evening last at 7 p.m. promptly the airship "Graf Zeppelin" made her second landing on British soil. The first landing was made at Cardington, and on Tuesday she landed at Han-

worth. On each occasion she was extremely fortunate in her weather, which was just perfect from the point of view of airship piloting. There was no breeze to speak of, and no steep temperature gradient. These were conditions which made it easy to fly an airship down almost into the hands of the landing party. It gave no chance to Dr. Eckener and his very experienced coxswains to display their well-known great skill. None the less, in the very easy conditions of Tuesday evening, the ship was flown down with an accuracy and an apparent ease which aroused the admiration of all onlookers. It showed the pitch of perfection to which training and constant practice can bring an airship crew. A word of praise must also be given to the landing party of volunteers raised locally and commanded by Squadron Leader Booth, A.F.C., the captain of R 100. They, too, found their task as easy as landing an airship can ever be. But they did everything right, and held the nose steady while the tail was being worked down by trimming the ballast inside. As one watched, one could not help recalling a remark of Booth last year when, on a very squally evening, he laboriously but skilfully worked R 100 up to the nose of the Cardington tower. Very ruefully he remarked: "No one in this country has had much experience in handling airships for the last ten years." Dr. Eckener is in a much more fortunate position.







THE FIRST VICKERS SUPERMARINE ROLLS ROYCE S.6.B.—MARKED S1595:  
Flight-Lieut. Long in the cockpit. (FLIGHT Photo.)

## THE SCHNEIDER CONTEST

**H**ISTORY repeats itself. In August, 1929, we were in doubt as to whether either the Italian or American—to say nothing of the French—entries for the Schneider Contest would materialise. We are now in much the same position, only the doubts are raised at an earlier stage of the proceedings, which gives us more time to take stock of the situation. It has not been possible to get authentic information from either France or Italy, but authorities in both countries are talking in dubious tones about the chances of their team being ready in time to take part in the contest. It had been understood that Italian preparations were well advanced when the fatal accident to Capt. Monti shocked everyone. British correspondents in Rome do not, however, seem to think that this accident is the governing factor in the situation. General Balbo is expected to make an official announcement in a few days. With our knowledge of the sporting spirit which animates the Italian Royal Air Force, we feel considerable confidence that the Italian team will duly arrive at Calshot and do their best to win the trophy. Even if they have to trust to luck to some extent, it would seem well worth their while to start their seaplanes on September 12. In 1929 the discovery of a flaw in one cylinder of the engine in Waghorn's machine, on the very eve of the speed contest, put Britain's chances in jeopardy; and had it not been possible to change the whole cylinder block during the night, the race next day would have resulted in Dal Molin winning the contest for Italy.

The position in France is still more obscure. It has been stated that there is in existence only one, or at most two, seaplanes of Schneider racing class, and that there is only one pilot in France able to fly these machines;

while another rumour adds that this pilot has not had sufficient practice on the racer types. Considering that France formed a high-speed flight of Service pilots in preparation for the 1929 contest, and has had a team in training at Etang de Berre for months past, it is difficult to credit these rumours. France has never been backward in producing pilots of the highest class. The production of the seaplanes and engines may have been tardy—that has been a common experience of Schneider teams in various countries. But that pilots should be wanting in France is scarcely credible. We still hope that the French team will duly arrive at Calshot.

At Calshot the weather has lately been bad, and on more than one day flying has been impossible. This has been unfortunate. Five pilots have to be put through training on the new racers, and for this purpose there are available only two S.6 machines of the "B" class and one of the "A" class. Practice on the Gloster biplane, the Gloster 6, and the S.5 is very useful, but not quite the same thing as flying the S.6 machines.

Major C. C. Turner has written in the *Daily Telegraph* that, despite other statements to the contrary, he has ascertained that the wings of the S.6 are the same in span and area as in 1929.

The draw for order of starting has taken place. The order will be:—Great Britain, 1;



Squadron Leader Orlebar, A.F.C., Captain of the High-Speed Flight, and Mr. R. J. Mitchell, the Supermarine Chief Designer. (FLIGHT Photo.)

France, 2; Italy, 3. This means that the first machine off will be a British one, and that the other countries will know something about its lap times before they start. The second machine will be French, the third Italian, the fourth British, and so on. In the event, we hope a very unlikely event, of no challenger facing the starter, it may be taken for granted that the British team will race round the course and claim a victory. In that case the trophy will become a permanent possession of the Royal Aero Club of the United Kingdom.

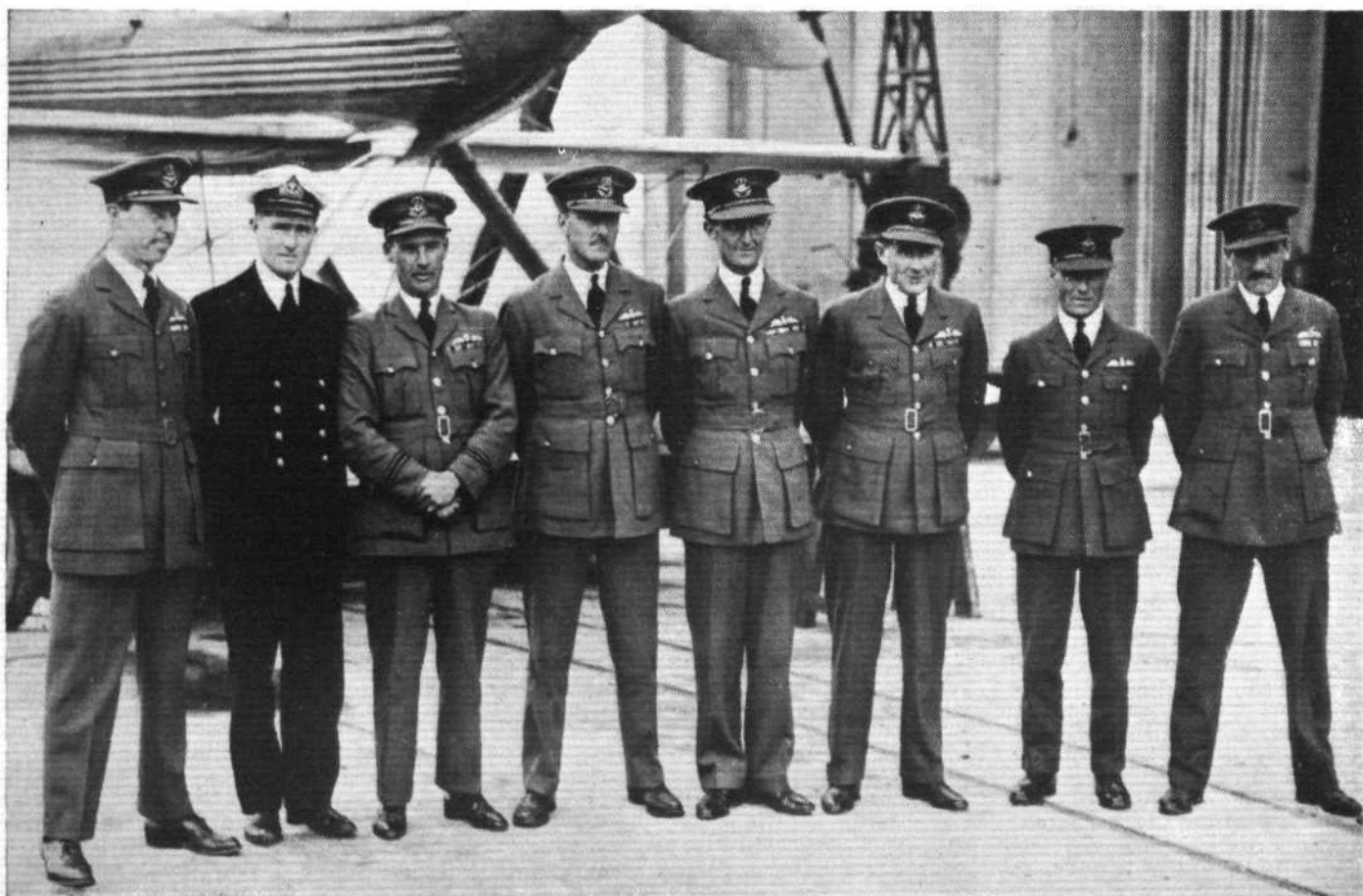
#### Careers of the British Team

**Squadron-Leader A. H. Orlebar, A.F.C.**, Captain of the British team, was born at Higham Ferrers, Bedfordshire, in 1896, and was educated at Rugby. He was also in command of the British Schneider team in 1929, and is the holder of the world's speed record, having accomplished a speed of 357.7 m.p.h. on a Supermarine Rolls Royce S.6 on September 12, 1929. Squadron-Leader Orlebar joined the 5th Battalion Bedfordshire Regiment (T.F.) as a second lieutenant early in 1915, and served with his unit in Gallipoli, where he was wounded. In the following year he became a flying officer in the Royal Flying Corps, and graduated as a pilot at the Central Flying School. He saw service in France with No. 19 Squadron, with No. 73 and with No. 43. He was wounded a second time while serving with No. 73 Squadron. He also served at home with Nos. 39 and 44 Squadrons, which were formed specially for the defence of London. When the war ended he had reached the rank of captain in the Royal Air Force, and was soon afterwards granted a permanent commission as flight lieutenant. Since the war he has been engaged on various flying and air staff duties. For several years he was a test pilot at Martlesham Heath, and he also served on the headquarters staff in Iraq. He graduated at the Royal Air Force Staff College in 1926. From 1927 to 1929 Squadron-Leader Orlebar was employed on staff duties in the Directorate of Organisation and Staff Duties at the Air Ministry, and was then appointed to command the 1929 High-Speed Flight. After the Schneider Trophy race in 1929 he was posted to Felixstowe to command the Flying-Boat Development Flight, a post which he occupied until he was again selected to be Officer Commanding the High-

Speed Flight. He has personally flown and tested, as in 1929, the new aircraft—the modified S.6.A and the new S.6.B—before the other members of the flight flew them. He was awarded, in 1921, the Air Force Cross for valuable flying services, and in the King's Birthday Honours List in June, 1930, he was given a bar to his Air Force Cross. He is the holder of the "L. S. Thompson Speed Trophy" for establishing the world's greatest speed record.

**Flight-Lieut. F. W. Long, R.A.F.**, was born in 1899 at Long Ashton, Somerset. He was educated at Lancing and joined the R.A.F. as a cadet in October, 1917. He was commissioned as a second lieutenant early in 1918, and was posted to No. 65 Squadron in France shortly before the war ended. Soon after its return home, in 1919, he joined No. 10 Squadron, and later, No. 108 Squadron. He was also employed at No. 2 School of Navigation and Bomb Dropping, and with No. 11 Training Squadron before being demobilised in September, 1919. Two years later he was granted a short-service commission, and saw service with No. 55 (Bomber) Squadron in Iraq, and later with No. 47 (Bomber) Squadron in Egypt. Flight-Lieut. Long was granted a permanent commission in 1925, and for several years was at Farnborough as an experimental and test pilot. In 1929 he proceeded to the Marine Aircraft Experimental Establishment at Felixstowe, where, in addition to other duties, he carried out research flying with high-speed aircraft. In May of this year he was appointed to the High-Speed Flight. He is classed as an A.2 flying instructor, and was mentioned in despatches in connection with operations in Kurdistan in 1924.

**Flight-Lieut. J. N. Boothman, R.A.F.**, was born at Harrow in 1901 and was educated at Harrow High School and the County School. At the age of 16 he became a voluntary motor driver with the French Red Cross, and was employed in the Balkans between January and September, 1918. For his services he was awarded the French Croix de Guerre. He was granted a short-service commission in the Royal Air Force in 1921, and served with No. 4 (Army Co-operation) Squadron at home and at Constantinople. In 1924 he became a flying instructor at the Central Flying School, being classed as an A.1 instructor. In January, 1926, he was granted a permanent commission and in the autumn of the same year he proceeded to Iraq,



**THE BRITISH HIGH SPEED FLIGHT:** Names to right—Flt.-Lt. E. J. L. Hope, A.F.C.; Lieut. G. L. Brinton, R.N.; Flt.-Lts. F. W. Long and G. H. Stainforth; Sqdn. Ldr. A. H. Orlebar, A.F.C.; Flt.-Lt. J. N. Boothman; F/O L. S. Snaith; and Flt.-Lt. W. F. Dry. (FLIGHT Photo.)



where he saw service with No. 55 (Bomber) Squadron, and later was employed on Air Staff duties at R.A.F. headquarters, Iraq. He then joined No. 30 (Bomber) Squadron, which was stationed in the same country, and a year later proceeded home to No. 32 (Fighter) Squadron. In the beginning of 1930 he was posted to the Marine Aircraft Experimental Establishment at Felixstowe for research work of high-speed aircraft. He joined the High-Speed Flight for this year's Trophy race in May of this year.

**Flight-Lieut. G. H. Stainforth** was born at Beckenham in 1899, and educated at Dulwich, Weymouth and Sandhurst. In August, 1918, he received a commission in the Buffs, and after a short period in France saw foreign service with his battalion in India (1920), Iraq (1921), and Aden (1922). He retired from the regular Army in 1922 and was granted a short-service commission in the Royal Air Force in the following year. After graduating as a pilot in 1924 he was posted to No. 19 (Fighter) Squadron, one of the home defence units, and later became a flying instructor in No. 4 Flying Training School in Egypt. In 1927 he went to the Central Flying School as an instructor, and in the autumn of 1928 was posted to the High-Speed Flight for training as one of the pilots from whom the Schneider Trophy team for the 1929 contest would be selected. He did not, however, fly in the race, as his machine, a Gloster Napier 6, was not available in time for the contest. On September 10, 1929, he made an attempt on this aircraft to break the world's speed record, and wrested the record from the Italians by accomplishing a speed of 336.3 m.p.h. Flight-Lieut. Stainforth was granted a permanent commission in the Royal Air Force on October 1, 1929, and early in 1930 was appointed Flight Examining Officer for Fighting Area, Air Defence of Great Britain. He was posted to this year's High-Speed Flight in April. He is classed as an A.1 flying instructor, and was a member of the Royal Air Force Rifle and Revolver teams from 1923 to 1931. He was Royal Air Force Rifle champion in 1928, and is the present Royal Air Force Revolver champion. He was in the "King's

100" at Bisley in 1928. He flew as navigator with Flight-Lieut. R. L. K. Atcherley in the Gloster Grebe, which won the King's Cup Air Race in July, 1929.

**Flying Officer L. S. Snaith, R.A.F.**, was born in 1902 at Carlisle, and educated at the Cathedral School in the same city. He enlisted as a boy in the Royal Flying Corps in November, 1917, and after completing his course of training with the Boys' Wing at Cranwell, he was posted in 1919 to No. 28 Group, for duty in aircraft repair depôts. He qualified as a fitter (aero engine) and as a draughtsman. He was promoted to aircraftman (2nd class) in 1920, to aircraftman (1st class) in 1921, and later in the same year to leading aircraftman. In May, 1922, he was selected for a course of flying training at No. 1 Flying Training School, and was promoted to sergeant in April, 1923.

He served until 1927 with No. 11 Squadron at the Central Flying School, with No. 2 Flying Training School, and at the Armament and Gunnery School. For the greater part of this period he acted as a flying instructor. He was promoted from the ranks in 1927, being granted a permanent commission, and was appointed to No. 5 F.T.S., again as an instructor, where he served for nearly three years. Flying Officer Snaith attended, in 1930, the engineering course at Henlow, and early in 1931 was posted to the Marine Aircraft Experimental Establishment at Felixstowe as a seaplane test pilot. He was posted for duty with the High-Speed Flight in May of this year.

Flying Officer Snaith is classed as an A.1 flying instructor. In 1925 he won the Duke of York's Cup at the Royal Air Force Display in the landing competition, and has represented the Royal Air Force on many occasions in inter-services athletic championships. In 1927 he won the Royal Air Force half-mile championship, creating a new record in the time of 2 min. 0 4-5 sec. He was capped for the Royal Air Force Rugby XV in 1922, 1923 and 1924. He has also played for Bath.



The second Vickers Supermarine Rolls Royce S.6.B.—Marked S 1596. An illustration of the first machine, S 1595, was published in last week's issue. (FLIGHT Photo.)

## DEATH OF LIEUT. BRINTON

On the eve of going to press we received the tragic news that Lieut. G. L. Brinton, R.N., was killed in an accident off Calshot on Tuesday evening. He went out to make his first flight on the Supermarine Rolls-Royce S.6, N.247, the machine which won the last contest and established the world's speed record. The seaplane was towed out for some two miles towards the junction of Southampton Water and the Solent, and Brinton took his place in the cockpit. The water was in good condition for seaplane work, the breeze was light, and the visibility quite sufficient. Sq.-Ldr. Orlebar and F./O. Snaith were in a launch near by. Soon after 8 p.m. Brinton began to taxi and opened his throttle. The machine began to "porpoise," that is to say, to lift off the water before it had gained flying speed. Twice she lifted off the water and fell back again. The third time she lifted, and then dived down nose first into the water, and turned over. The floats were wrenched off the fuselage and one wing also came away, from the tremendous force of the impact. All the boats in the vicinity dashed to the rescue. F./O. Snaith, Flt.-Lt. Castaldini (of the Felixstowe staff), and A./C. Candy tore off their clothes, and, with ropes round them, dived in and tried to get to Brinton in the cockpit.

Snaith, a fine athlete, succeeded in reaching the body of the pilot, but could not undo his belt. All hope of saving his life had to be abandoned, and doubtless he had been killed instantaneously by the crash. The machine was towed ashore, and an inquiry into the cause of the accident will be held.

Lieut. G. L. Brinton, R.N., Flying Officer, R.A.F., was born in 1905 at Bewdley, Worcestershire, and was educated at the Royal Naval Colleges at Osborne and Dartmouth. He was commissioned in the Royal Navy as a sub-lieutenant, and after a period at Portsmouth he was posted to H.M.S. "Hood." In 1927 he was granted a temporary commission as a flying officer, Royal Air Force, on attachment for four years to the Royal Air Force for service with the Fleet Air Arm. He was promoted Lieutenant, R.N., in August, 1927. On completion of his flying training at No. 1 Flying Training School, and at the training base at Leuchars, Lieut. Brinton was posted to No. 407 (Fleet Fighter) Flight in the Mediterranean, with which unit he served abroad and at home until he was selected in April of the present year as a member of the High-Speed Flight. He was the first officer of the Fleet Air Arm to be chosen for duty in the Flight.

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## THE VISIT OF THE GRAF ZEPPELIN

**T**HE GRAF ZEPPELIN continued her record of successful trips when she arrived at Hanworth and landed punctually to programme at 7 p.m. on Tuesday evening, August 18.

She left Friedrichshafen at 7.5 a.m. the same morning. She did not touch Paris but passed some 90 miles to the E.S.E. over Troyes. At Beauvais she followed the regular continental route over Abbeville, which was passed at 3.15 p.m. The English Channel was crossed at Cap Gris Nez and the flight to London made via Brighton, Folkestone, and up through Sussex.

The weather throughout the trip was good and even improved towards the evening, so that when the landing was made at Hanworth the conditions were ideal. The airship first arrived over Hanworth Park at 6 p.m. and then turned and made an extensive tour of London. One would have imagined that her commander was aware of the situation of FLIGHT office for he took the ship straight up Gt. Queen Street and passed immediately over us at 6.24 p.m.

A little before 7 p.m. she was again over Hanworth, where she dropped her mails by parachute, then swinging wide she made a circuit before coming in to land.

A volunteer landing party had been drilled carefully and were all ready with Sqd.-Ldr. Booth and Capt. Meager in charge, and, needless to say, they carried out their part of the landing excellently. As the airship came in low over the trees she headed straight for the landing party and we were treated to one of the most superb exhibitions of handling anyone could wish to see. When the nose was over the party the trap doors in the bow were opened and the mooring ropes dropped; then without the slightest hitch or confusion these were taken out on either side by the right men and the airship's head gently held down until the main gondola was within reach of the party who were standing by to seize the rails running along each side of it. They then, by pulling down further, brought the rear engine gondola within reach of another group who were standing beneath it, and as soon as they had its rails in their grasp the airship could be said to be moored.

The next official part of the programme was the transference of the passengers. This was done two at a time so as to disturb the trim of the airship as little as possible. As two of those who came over with her from Germany disembarked, two of the new passengers embarked, 22 came over and 24 embarked for the cruise round England, and among these latter were Col. F. C. Sheldermine, the Director of Civil Aviation; Col. the Master of Sempill; Lord Inverclyde and Lord Newborough. When she left, the intention was that the route taken should be to Falmouth, then along the north coast of Cornwall, over the Irish Sea to Dublin and Belfast, then on to Glasgow, and finally straight back to Hanworth.

The landing itself, apart from being a masterly one, was also one of the most moving scenes. The crowd, which must have numbered some 20,000 or more, were

so enthusiastic that they became completely out of control, and immediately the airship was secured they broke down all barriers and swarmed over the ground. What police there were were swept aside and in a very few moments the airship was surrounded with a seething mass of people. They surged round the gondola and did not even give Dr. Eckener a chance to get out nor Mr. Montague, the Under-Secretary of State for Air, the room to make his official welcome.

When the crowd was finally forced back and an open space cleared, Dr. Eckener went to the microphone and, in a brief speech in English, expressed his thanks for the welcome he had received. He stressed the point that the airship was an important instrument in furthering the good relationship of the nations by being able to make long flights across the seas and bringing the nations nearer to each other.

Mr. Montague welcomed Dr. Eckener and his officers on behalf of the Secretary of State for Air and the Air Council. He said that the airship's progress had been followed with great interest wherever it had been, and they appreciated the willingness with which this present trip had been made. Mr. Montague then presented Dr. Eckener with a gold cigarette box from his German friends in this country.

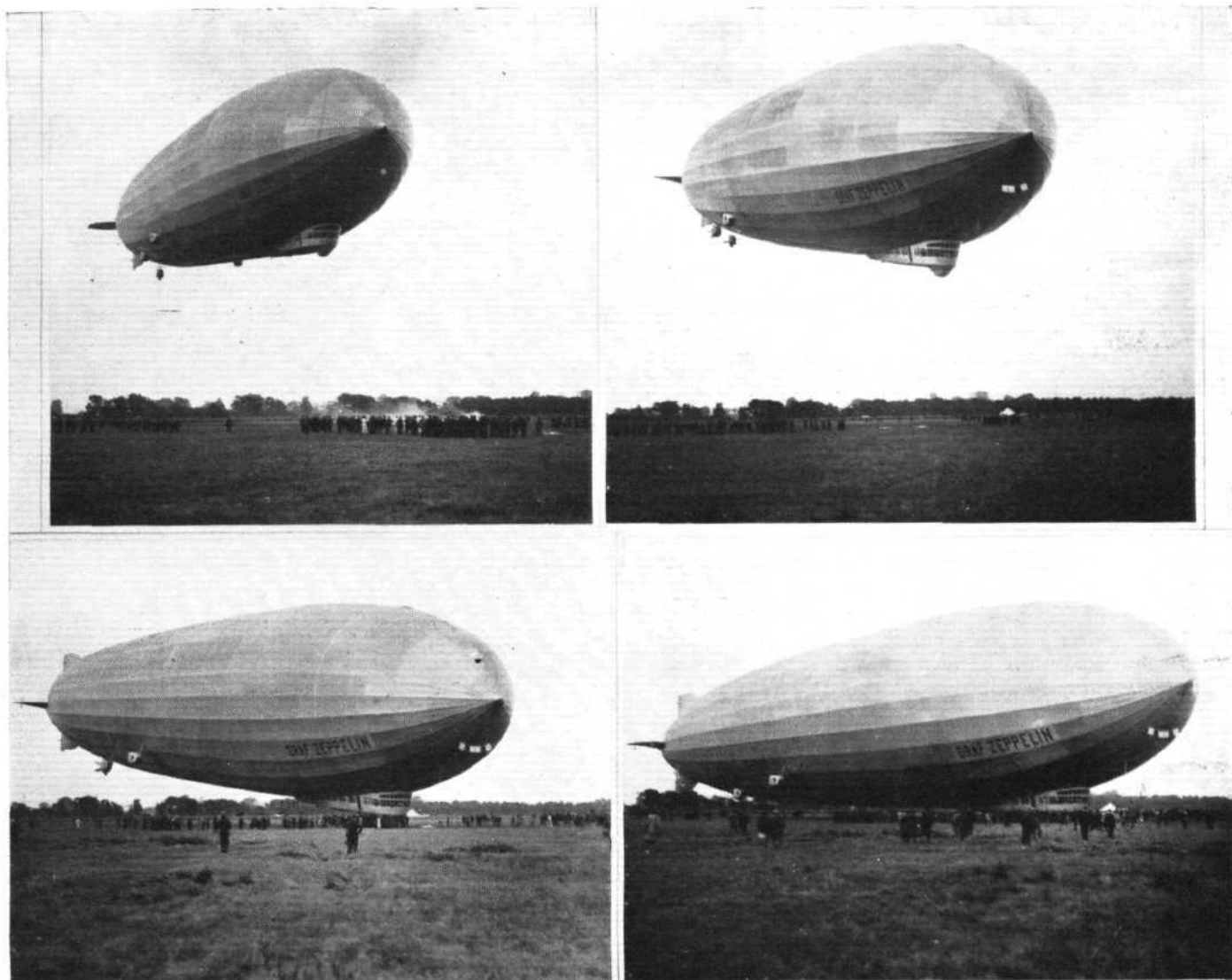
Dr. Eckener made a short reply, and said that he considered it a privilege to feel that he had been of some slight assistance to the furtherment of British airship development. He said that his 30 years' experience showed him that development could only be achieved on a world-wide scale with complete international co-operation.

The take-off, which was made at 8.0 p.m., went as we expected, with the great smoothness, despite the efforts of the crowd to make things as difficult as possible for her commander. When they were pushed back, however, she was allowed to rise a little and then hauled down again; this was just to test the buoyancy and to see that she was light enough to rise clear when let go altogether. Then a signal was given, we heard a whistle blown, the men on the gondolas held on while the ropes were drawn up into the nose, a further whistle, and up she went. Then the engine-room gongs clanged, the motors started up, and the airship left Hanworth on her further cruise.

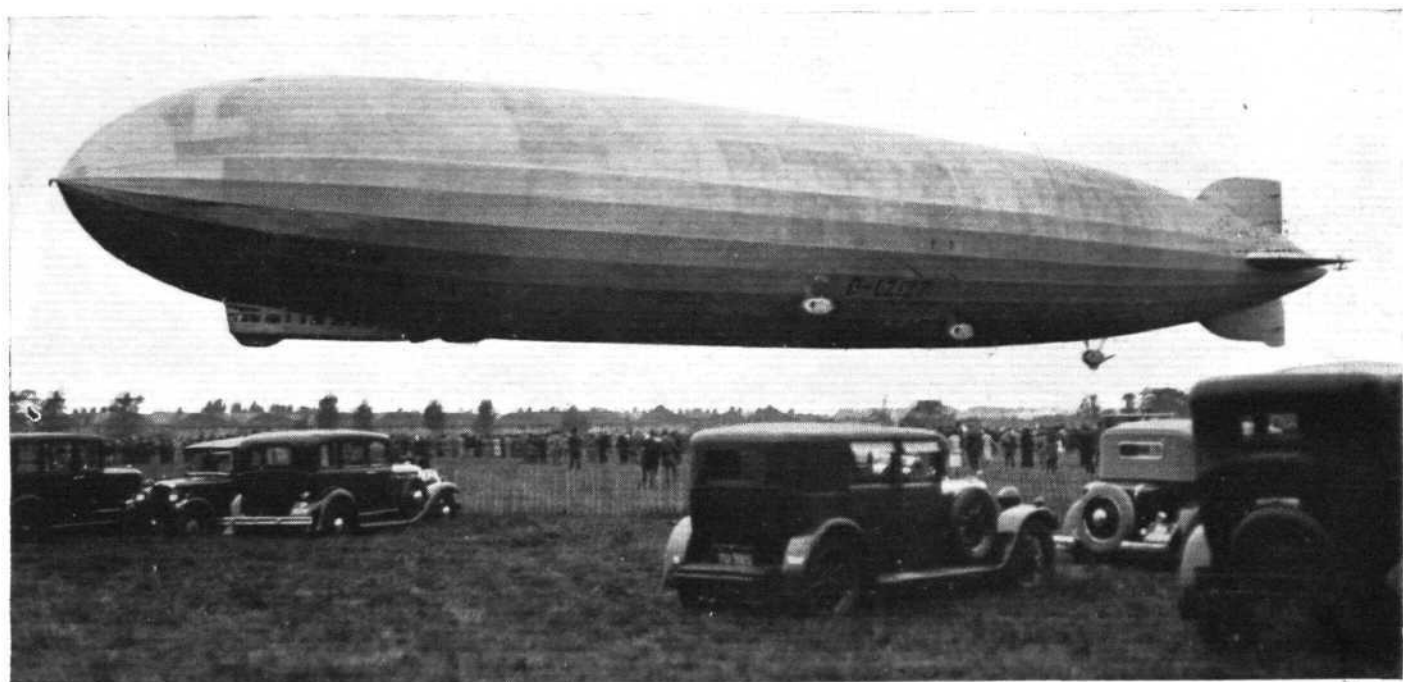
The *Graf Zeppelin* passed over London on its return from the cruise at 6 p.m., August 19, and arrived at Hanworth just before 7 p.m.—as usual, according to schedule—moored at 7.10 and left again at 7.30.

We feel that Col. The Master of Sempill is to be congratulated on his enterprise in getting the *Graf Zeppelin* to make this journey to Hanworth and then around England, and his justification for doing so was shown by the terrific crowd which invaded the stately home of National Flying Services at Hanworth Park.

Following this cruise it has been announced that the *Graf Zeppelin* will make two cruises to South America. The first of these will start on August 26 and the second on September 19. The destination is said to be Pernambuco on each occasion.



**A PERFECT PIECE OF AIRMANSHIP:** Bringing the "Graf Zeppelin" into Hanworth. In the upper left-hand corner the airship is seen dropping the mooring ropes. On the right, the ropes have been caught by the ground crew, while the two lower views show the airship just about to touch and, on the right, securely moored. (FLIGHT Photos.)



**AN EASY START:** The "Graf Zeppelin" was trimmed slightly light while moored, so that as soon as the ground crew let go she simply rose slowly, the engines being started when a height of about 100 ft. had been obtained. (FLIGHT Photo.)



## THE "DEUTSCHLANDFLUG," 1931



**THE WINNER:** The Klemm L.26 Va (Argus As 8) which Lieutenant Dinort flew to victory.

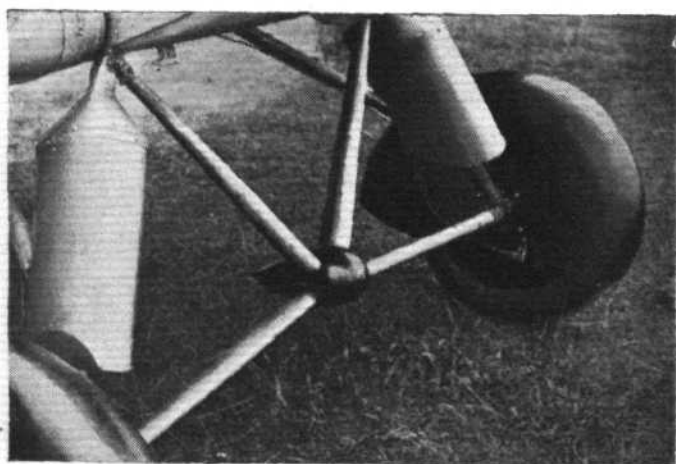
Of a national character, the 1931 "Deutschlandflug," just concluded, was limited to German pilots on German light planes with German engines. The rules and regulations were slightly different from those which have been in force at previous competitions of this kind, chiefly because it was desired so to design the regulations that at the finish the first man to cross the line at Berlin should be the winner.

As in previous national and international light plane competitions, the "Deutschlandflug," 1931, organised by the Aero Club of Germany, was divided into two sections: A series of technical tests, and a handicap race around a two-days' circuit. The innovation lay therein that the technical tests were made the basis of the final handicapping in such a way that the points gained in the technical tests were converted into minutes' difference in starting time.



**FIRST IN THE TECHNICAL TESTS:** Reinhold Poss (Klemm-Argus) secured the highest number of points in the technical tests.

Thirty light aeroplanes had been entered for the "Deutschlandflug." For a time it looked as if the present financial crisis in Germany might necessitate a postponement or the total abandonment of the competition, but after mature consideration the German Aero Club decided to



**A NEW TYPE IN THE COMPETITION:** The BFW-Messerschmitt 27 flown by Theo Croneiss was fitted with "spats," and the control cables could be inspected through the flap doors near the tail.



**SECOND PRIZE:** Wolf Hirth secured second place on the Klemm fitted with the engine designed by his brother Hellmuth Hirth, who is seen standing on the left.

carry on, as the postponement of the contest would have imposed heavy financial sacrifices on competitors.

The technical tests took place at the Staaken aerodrome, Berlin, in the days from August 11 to 13. The race started from Staaken on August 15 and finished at Tempelhofer Feld, Berlin, on August 16.

#### Technical Tests

The preliminary technical tests were of the same general character as on previous occasions, *i.e.*, points were awarded for folding or dismantling the wings and re-erecting them, for engine starting (prop-swinging not permitted), for take-off and pull-up (this time not over an obstacle), for minimum speed, for fuel consumption, and for certain practical qualities, equipment, comfort, etc.

In the technical tests, especially in the take-off and alighting tests, competitors did less well than they have done in previous competitions. It is thought that this may have been due to the absence of any obstacle by which the pilots could be guided.

By good organisation, and to some extent due to suitable weather conditions, it was found possible to get the technical tests through in one day less than had been set aside for them. This was all to the good, as it enabled the pilots to get a much needed day's rest before starting on the race.

As a result of the technical tests, Reinhold Foss, who was flying a Klemm L.26, with Argus As 8 engine, secured first place with a total of 61 points. Second was Lieut. Dinort (also on a Klemm L.26-Argus) with 56 points, and third, Wolf Hirth (Klemm-Hirth) with 51 points.

The machine flown by Wolf Hirth was of particular interest in that it was fitted with the new Hirth engine, designed by Wolf Hirth's brother, the famous German pioneer pilot, Hellmuth Hirth.

Yet another interesting machine entered was a Messerschmitt, with spats over the wheels and an auxiliary aerofoil mounted above the main wing surface in such a manner as to smooth out the airflow, much as does the



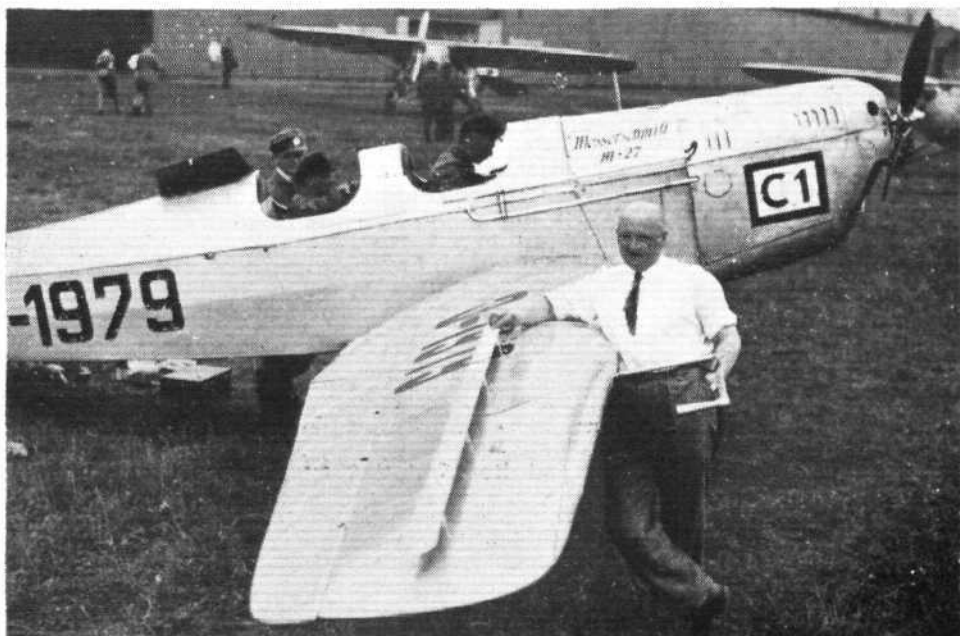
Handley-Page slot, but, being away from the leading edge, presumably the slot action was supposed different from that of the H.P. It appears that the slot arrangement on Theo. Croneiss's BFW M.27-Argus availed him nothing, for, although it may have prevented the machine from going into a spin, Croneiss was not able to score any points in his slow-flying tests, whereas Foss and others scored as high as 20 points in this test.

#### The Race

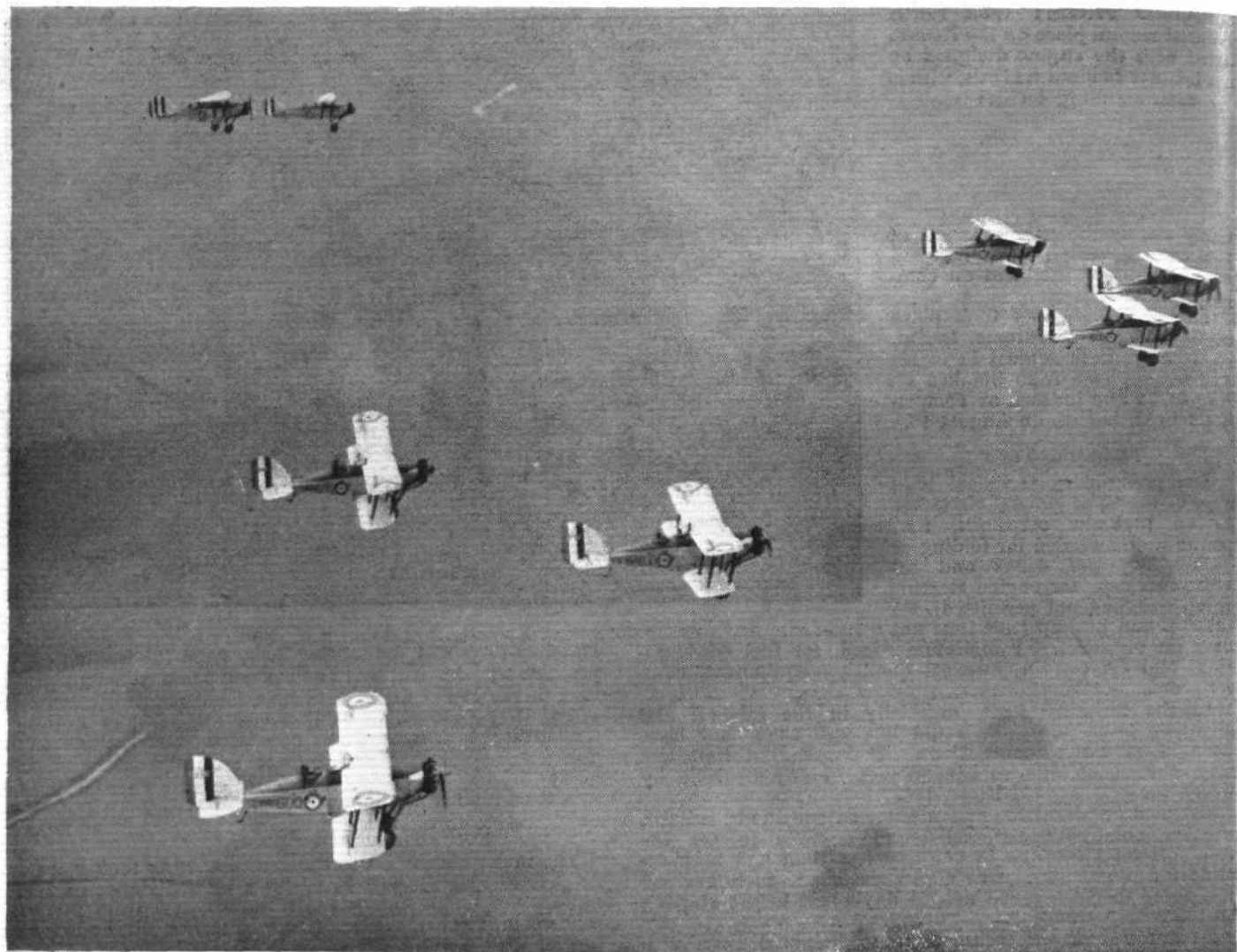
The race which followed the technical tests took place on August 15 and 16, and was over a total distance of 1,325 miles. On the first day the machines flew from Staaken to Munich, via Lübeck, Münster and Böblingen, and on the second they covered the route Munich—Berlin, via Vienna and Breslau.

The first man to arrive at Tempelhofer Feld was Lieut. Dinort, who was thus the winner of the competition. Second was Wolf Hirth. Both were flying Klemm L.26 monoplanes, but, whereas Dinort's machine was fitted with the Argus As 8 engine, Hirth's machine had, as already stated, the new Hirth engine.

It is gratifying to find that one of Germany's pioneer pilots should thus score a success in the first competition in which his new engine takes place. Hellmuth Hirth was a well-known figure at flying meetings before the war, and older readers of FLIGHT may remember that on one occasion he and the famous French pilot, Garros, were at Hendon together, walking about with arms around each others' shoulders. A short time later they were at war with each other, nationally, of course, and not personally. We could have wished Germany's famous pioneer pilot the success of a first prize in the "Deutschlandflug," but, at any rate, his second place was no mean recompense.



**NOT HANDLEY PAGE AND NOT LACHMANN:** The Messerschmitt machine flown by Croneiss was fitted with an auxiliary aerofoil above the main wing, placed at approximately one-third chord length back from the leading edge.



The Squadron in formation near Tangmere.  
(FLIGHT Photo.)

## No. 600 (CITY OF LONDON) (BOMBER) SQUADRON

By MAJOR F. A. de V. ROBERTSON, V.D.

**A** VISIT to the City of London Bomber Squadron in its annual camp at Tangmere aerodrome was an extraordinarily interesting experience. To explain why it made such a particularly deep impression on the present writer, I must ask leave for a few words of personal explanation. I have qualified for the Volunteer Officer's Decoration (India), which, taking ranks service at home and commissioned service in India together, meant about 20 years' service in auxiliary forces. I have seen much of the difficulties which face those who work to make an unpaid fighting unit efficient. I know how the enthusiasm of a few has to be set against the lukewarm feelings of the many and the absolute slackness of another few. In an infantry battalion some are keen on musketry only, others on extended order and sham fighting, others on drill and ceremonial. Some take a pride in turning out smartly in uniform, while others despise what they call "spit and polish." Very few indeed feel an urge to make the whole unit, and every member of the unit, smart in everything which goes to make up a soldier.

With such experience behind me, I was naturally very curious to see how an auxiliary squadron of the Air Force shaped after about five years of existence. I may say at once that I was quite astonished by what I saw. Once there was a discussion on auxiliary squadrons at a house dinner in the Royal Aero Club, and the late Squadron-Leader Lord Edward Grosvenor said, in his chaffing way, "We shall surprise you yet." His words have been amply

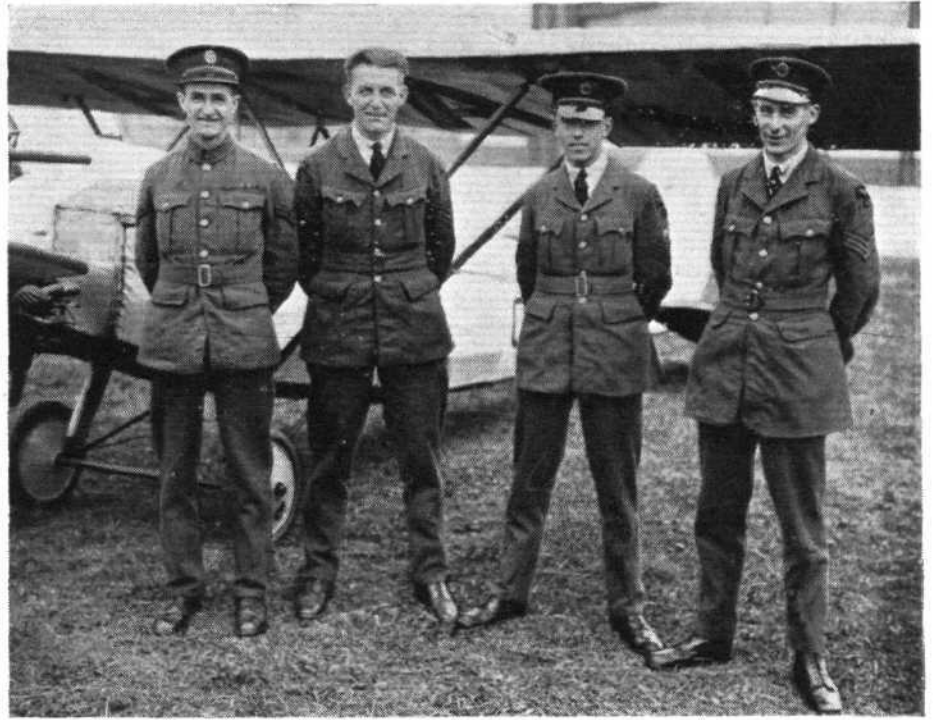
fulfilled, and one only wishes that he could have lived to see their fulfilment.

The airmen of No. 600 (Bomber) Squadron deserve pride of place. There is a nucleus of 30 regulars, who are not all fitters and riggers. They include one armourer corporal, one wireless corporal, one photographic corporal, and so on. The remainder are auxiliaries. The establishment is 149, and the squadron has a strength of 145, of whom 130 were present in camp. This is a remarkably good proportion, and I can remember very few occasions in my volunteering days on which anything like that proportion of my battalion's strength attended camp. Most of the men are taking this strenuous fortnight in camp as their only summer holiday. I have not the least doubt that they enjoy it very much—to the right sort of healthy man an energetic holiday is far preferable to a loaf and a lounge—but still there are other attractions in life which must sometimes be sacrificed with regret. These airmen are without doubt amazingly keen, and, what is more, their squadron and its reputation must make a very strong appeal to them.

Naturally, the visitor asks what do these very efficient airmen do in civil life. Auxiliary squadrons are invariably stationed near large towns, partly with the idea that towns have plenty of garages and other workshops, and that it will be easy for the squadron to recruit men who are mechanics by trade, and who will find it easy to learn all about rigging and fitting, and the other trades con-



**THE "CHEETAH" CLUB:** These four airmen of No. 600 B.S. learnt to fly, and bought the Clarke "Cheetah" for their own use. (FLIGHT Photo.)



nected with the upkeep of aircraft and engines. The City of London Squadron, however, has only three professional mechanics in its ranks. The rest are mainly City clerks, with a sprinkling of some half dozen public school men. One did not expect to find that. The next question which naturally arose was: Do the machines and engines suffer from the attentions of airmen who presumably have not the mechanical mind and certainly have not the training of a professional mechanic? Do fingers accustomed to ply the pen prove clumsy when they attempt to wield the spanner? The answer is that each flight is maintaining its own machines and engines in flying order. The squadron does not rely for its maintenance on the nucleus of regulars. Moreover, the machines and engines are right well maintained. Probably the men, when they enlisted, mostly possessed motor bicycles, and knew something about keeping them in order. But they must have had to learn a tremendous lot before they could take charge of a "Jupiter" and keep it functioning satisfactorily; and now they have reached that pitch of efficiency. It shows what a good squadron can do with good material, and it rather opens up a new question as to what is good material from the mechanical point of view.

As is well known, outward and visible signs often indicate the degree of inward and spiritual grace. When this squadron landed after a flight, it was good to see how keenly the airmen ran out to meet the machines and got on to the wing tips to guide them in. That shows the right spirit, and it also argues some physical fitness.

The airmen provide the gunners, photographers, bomb-aimers and wireless operators, who occupy the rear seats in the "Wapitis." Here the high standard of education in the squadron is an obvious and undoubted advantage. The men are quick to learn and efficient in operation. There is great competition for these flying posts, for, of course, airmen like to get into the air, and especially to have a job in the air. The question is sometimes raised,

why should not auxiliary squadrons have airmen pilots? The answer, I suppose, may be that when all ranks are auxiliaries and cost the country next to nothing, there would be no economy in having airmen pilots. There can be little doubt, however, that the prospect of being taught to fly would be a great incentive to recruiting.

Some of the airmen of the City of London Squadron have actually learnt to fly, at their own expense, at Stag Lane. A little club of four members did so, and purchased the light aeroplane "Cheetah," with three-cylinder Blackburne engine, which was designed and built by the late Flying Officer Clarke. It is usually a single-seater monoplane, but can quickly be converted into a biplane when desired. These four sportsmen are shown in one of our illustrations. They all hold the "A" licence, but the club sets a higher standard of flying merit than does the Air Ministry. There is one of the members who is not thought good enough by the other three, and so, despite his "A" licence, he is not yet allowed to fly the "Cheetah."

The officers are worthy of their men and of their "Wapitis." They engage for five years, while the airmen enlist for four. Incidentally, there seems no possibility of a citizen officer or airman qualifying for an equivalent of the Volunteer or Territorial decoration or medal. Long



**The Airmen of No. 600 (City of London) (Bomber) Squadron:** All but about a dozen are City clerks, and they maintain their "Wapitis" and "Jupiters" in fine condition. (FLIGHT Photo.)



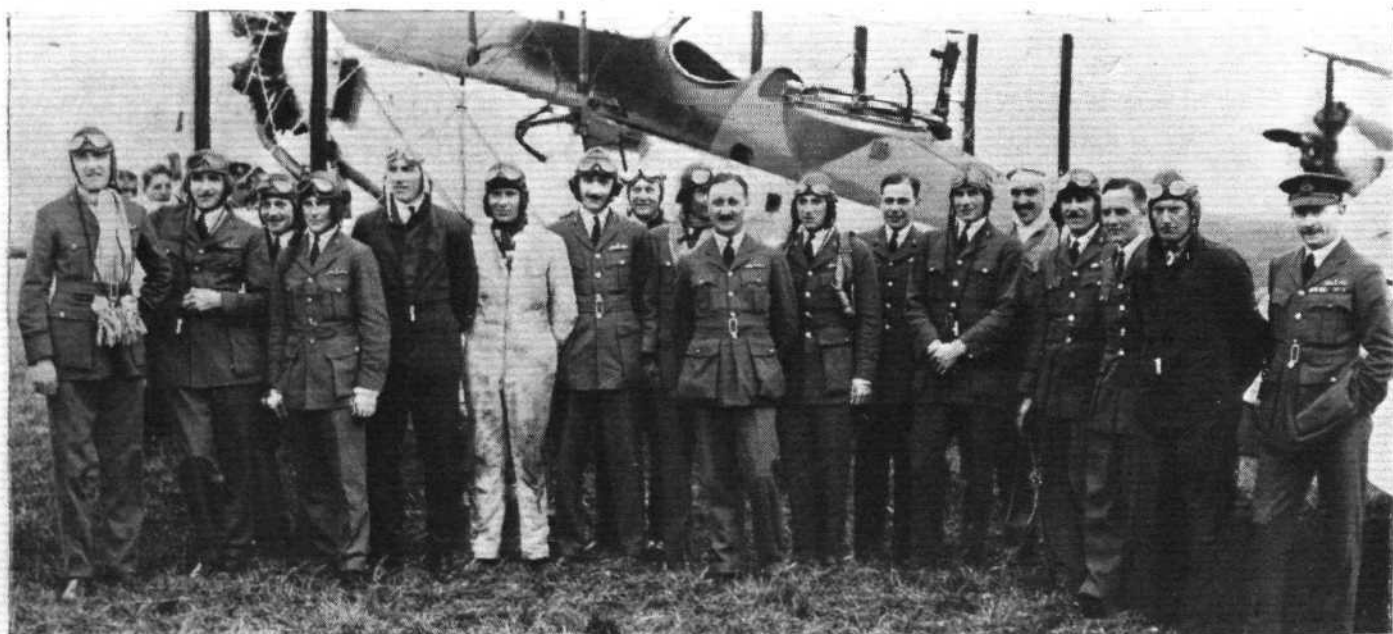
**GETTING READY FOR A FLIGHT:** The men of No. 600 B.S. are tremendously keen. (FLIGHT Photo.)

service is not valued by the authorities in the Auxiliary Air Force. This seems a pity; such decorations do help to stimulate keenness, and when one has qualified there is satisfaction in receiving a testimony to one's work. A second engagement is a possibility, but at present re-engagements are not common. Five of the officers are leaving the squadron at the end of this year, including the squadron leader and two flight-lieutenants. They do not intend to re-engage. The flight-lieutenants said that they would go on to the Reserve of Air Force Officers. They were sorry to leave the squadron, and they were sorry that, as they could not afford to buy private aeroplanes, they would get no more flying than what was entailed by annual training in the Reserve. But running a flight was a strenuous business, and took up pretty well all their spare time at week-ends. They were not only responsible for the machines and engines, but also for the flight stores. Each squadron has a regular stores officer, but flight stores have to be administered by the flight-lieutenants with the help of the clerical staff. Having done five years of this absorbing duty, they felt that they could hardly undertake another five years of it. These men will be a great loss to the squadron. They are valuable officers, and very good pilots and leaders. Fortunately, others are coming forward who are also good men, and who promise to fill the gaps worthily.

its regular officers. The adjutant, Flight-Lieut. E. A. Healy, is very keen on the squadron, and very efficient. His assistant until the other day was F/O. E. C. T. Edwards, who has now gone to Henlow. Both these officers were prominent in the King's Cup race. Edwards was the winner, and Healy came in fifth. The City of London Squadron was very proud of its successes in that gruelling race, and was very sorry to lose the King's Cup winner from its muster roll.

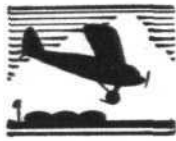
Of the squadron's formation flying one feels there is little to say except superlatives. It has taken part in the Hendon Display and shown the world that it need not fear comparison with regular bomber squadrons. It showed the same when I saw it flying round over Chichester and Arundel on the very misty morning of my visit. One machine flew left wing down; and I was told that the pilot was a very busy man on the circulation side of a great newspaper, and he could not get quite enough flying practice. Yet he kept his place in formation without a fault. When one compares his amount of practice with that of the regulars, his flying was extraordinarily good—and that was the only fault which could be found with the formation.

No. 600 (City of London) (Bomber) Squadron, Auxiliary Air Force, is a credit to the nation. It proves that the spirit of service is not yet dead.



**The Officers of No. 600 (City of London) (Bomber) Squadron in Camp at Tangmere.** (FLIGHT Photo.)





# PRIVATE FLYING AND CLUB NEWS



## TO IRELAND IN THE CUTTY SARK

**S**ATURDAY, August 15, was a great day for the Irish Aero Club, and in fact for the major part of Dublin, as it was the date of their first Air Pageant since 1911.

We ourselves made the trip over in a Cutty Sark, and no better type of aircraft could have been found for the purpose. It is on journeys such as this to Ireland that aircraft score, in this country, over all other forms of transport, for even the most ordinary machines can do the journey from London in little over five hours, after allowing plenty of time to get through the customs at Manchester (Barton Aerodrome). Most of the land machines went round by Stranraer, as the sea crossing up there is only a matter of some twenty miles, although what with the Solway Firth and Morecambe Bay there can in the aggregate be little less water to cross than by any other route. The more venturesome spirits crossed at Fishguard and Wexford, where the Irish Sea is narrower than at Holyhead, though wider than at Stranraer, but the crossing there makes the journey considerably shorter than if one goes right up to Manchester first.

The Cutty Sark is not a fast aircraft, although a cruising speed of 85 m.p.h. is within its powers, and after an early start at Heston we arrived at Manchester in about two hours. Despite the experience of many others that day who were forced to turn back on account of the bad weather, we ourselves found very little difficulty, and had good visibility the whole way. Manchester had, however, been indulging in a "wash-down," and the state of the aerodrome made us consider whether it would not be more advisable to wind up our wheels before landing!

On our arrival we found two pilots, one with an Avian (Genet II) and one with a Moth (Cirrus III), both of whom were going to Dublin, and who had nearly decided to go round by Stranraer. Our advent, however, put other ideas into their heads, and it was eventually agreed that they should come over with us, keeping station ahead, so that if they "had to swim instead of fly" there was a sporting chance that we should have been able to shorten that swim for them. Swimming was evidently not their idea of pleasure that day, for both kept ahead of us, and some two hours later we arrived still in formation at the entrance to Dublin harbour in a heavy rain storm. They seemed quite cheerful over their flight, and no doubt their trust in their engines was quite justified, but all the same both Capt. E. W. Percival and ourselves felt that our own cheerfulness was even more justified by virtue of the boat hull underneath us.

Our arrival at Baldonnel Aerodrome was somewhat like a homecoming, as quite a number of people there were already very familiar with the Cutty Sark, for members of the Guinness family have used one of these aircraft on many occasions.

We found about 15 visiting aircraft already there, and another three or four arrived a little later. Enthusiasm over flying runs high in Ireland, and during the afternoon's programme we were treated to many evidences of this, not only in the way the huge crowd surged over the fences to the aerodrome, but also in the exuberant manner

in which many of the indigenous pilots handled their machines. The question of safe flying is evidently one which will have to receive the serious attention of the authorities over there if flying is to become popular as a means of transport, since killing people only tends to stultify it by glorifying the pilots and maintaining it as a spectacle or species of stunt to draw crowds (vide the position in the U.S.A. where the daily death at the last National Air Races at Cleveland, Ohio, only served to swell the crowd and beat the "gate" for the previous day!).

Several times there were incidences where unnecessary

risks were taken, and on one occasion a pilot in a Moth zoomed up under the Cutty Sark in such a manner as to make the vision of a forced return by train and boat seem very close to reality—we on the ground feeling glad that we had decided not to go up with Capt. Percival for that occasion! The end of the race was another such occasion, and Capt. Robin Cazalet owed his freedom from a crash to the fact that his Puss Moth answered the controls without the slightest hesitation, thus enabling him to get out of a very tight corner caused by another competitor.

The display itself did not quite go according to the programme, but on the whole the crowd were given a good show. There was the usual variety of aerobatics and such things as bombing a car, and a parachute drop, which this time had to be done with a dummy, as Capt. Stewart had dislocated his shoulder a week or so before the meeting. Prizes were given for

two events, which were the arrival competition and a two lap race around the neighbouring hills. Both these were won by our old friend, Capt. R. G. Cazalet. We were glad to see that, for no private owner has tried harder and yet so often just failed to beat the handicapper for first place over here in England; so his winning the two premier awards at this meeting in his own country was peculiarly appropriate. With characteristic modesty Capt. Cazalet did not wait for the dinner which followed the display, and at which the prizes, in the shape of two magnificent silver cups, were to have been presented, but hurried off home to his own aerodrome near Wexford to get an evening's fishing!

Among the visitors was one who deserved especial mention, and that was the intrepid Miss Crossley, who put up such a fine show in the recent King's Cup race. She flew the long way round, and is now continuing to tour the country.

The Irish Aero Club was the outcome of the enthusiasm which followed the successful flight of the Bremen across the Atlantic. Col. Fitzmaurice presided at a public meeting in August, 1928, and at that meeting the club was born. Since that time over 18 "A" licences have been obtained by Club members, and the Club aircraft now consist of three Moths (Gipsy I). There are in addition four private owner members. The past three years have been trying ones for those who have been building up a solid future for the Club, but their efforts are now bearing fruit, one of the more recent signs of which was the Government grant to the Club of £1,000. The membership is growing, and the clubhouse on the aerodrome is



**The Rt. Hon. The Lord Mayor of Dublin (Senator Alfred Byrne) congratulating Capt. R. G. Cazalet on his winning the Open Handicap Race.**  
(Irish Times Photo.)



An Aerial view of Baldonnel Aerodrome. The H.P. W.10 in the foreground was doing joy-riding throughout the meeting piloted by Capt. E. B. Fielden. (*Irish Times Photo.*)

becoming a well patronised social rendezvous, so that altogether we can look forward to the Club soon being the chief power in Irish civil aviation.

In the evening following the display the Club gave a dinner to the visiting pilots, and thereafter entertained them all royally, so much so that few of them could have been said to be "ready for work" early next morning!

We with the Cutty Sark decided to do a little amphibious propaganda before returning to England, so on Sunday morning we took on board two "natives" and then proceeded to show them the value of such an aircraft by flying into Meath and landing them on a convenient lough near their home. The Cutty Sark is an even better boat than she is a land machine, and it would need to be a very small lough which would be too small for her; the twin engine arrangement makes her admirable to handle when taxiing, and we found no difficulty at all in manoeuvring while waiting for a boat to come out and take our passengers off. Those on shore with the boat seemed to think that the Cutty Sark was something supernatural to have come out of the skies and sit on their lake, or else they thought we were hijackers, or whatever the Irish equivalent is, for the sight of us seemed to leave them bereft of all sense. They stood and gaped, and even our passengers' good Irish took a very long time to stir them to action. However, they moved eventually,

and having disembarked our passengers, who were thoroughly pleased with their experience, we taxied down and took off for Baldonnel. The Cutty Sark took off with just the same ease as with which she landed, and our allowance of several hundred yards for the take-off was many many times more than was necessary.

Back at Baldonnel we took our leave of friends at the Club, and took off, again with our "escort," though this time the Avian was replaced by a Moth (Gipsy I), and finally headed for England. This was duly and safely reached, and we landed at Barton 2 hr. 10 min. later. The journey home was through very bad weather, and the Cutty Sark had a severe buffeting (no relation to the tail variety!), but she proved herself as airworthy as she is seaworthy, and if windscreen wipers were fitted she would be very pleasant to fly in bad weather.

So ended a most enjoyable week-end. After such a trip we must agree that it is worth a very great deal to have an amphibian aircraft and that it adds to the pleasure of flying enormously.

Let us hope that Col. Russell, Dr. Pepper, Mr. Reynolds and all the other stalwarts who worked so hard will soon be having another meeting at Baldonnel to which we may go, and also that they will come over to some of our meetings here and give our Clubs a chance of repaying the hospitality their members have received in Ireland.

**AVIATION AT BROOKLANDS.**—Exceptionally bad weather hampered the School's activities during the week, and as a result only 37 hours' instructional flying took place. Many pupils, however, turned up and spent most of their time in the lecture room, as it is the rule at Brooklands to give lectures on non-flying days and furnish every encouragement to pupils to study meteorology and navigation.

The recent air display at Clacton was a sensational success, and as a result another display is being given on August 26.

Four new pupils have joined the school. Messrs. Slaughter and Hardy have qualified for their "A" licences, while Mr. Dastur has successfully carried out his night flying tests for his "B" licence.

**BRISTOL AIRPORT.**—Private ownership is steadily on the increase at the Bristol Airport, and four members of the Bristol and Wessex Aeroplane Club have purchased machines this summer, including the president of the club, Lord Apsley, making a total of seven private owners in all. Three other members have signified their intention of increasing this number as soon as they have secured "A" licences.

Bristol has been no better served in the way of weather this summer than any other part of the country, and it has been a case of seizing the odd fine hours whenever possible to get in flying instruction. In spite of this, the club aeroplanes flew a record number of flying hours in July, beating the previous record of 226 hr. 20 min. by nearly two hours.

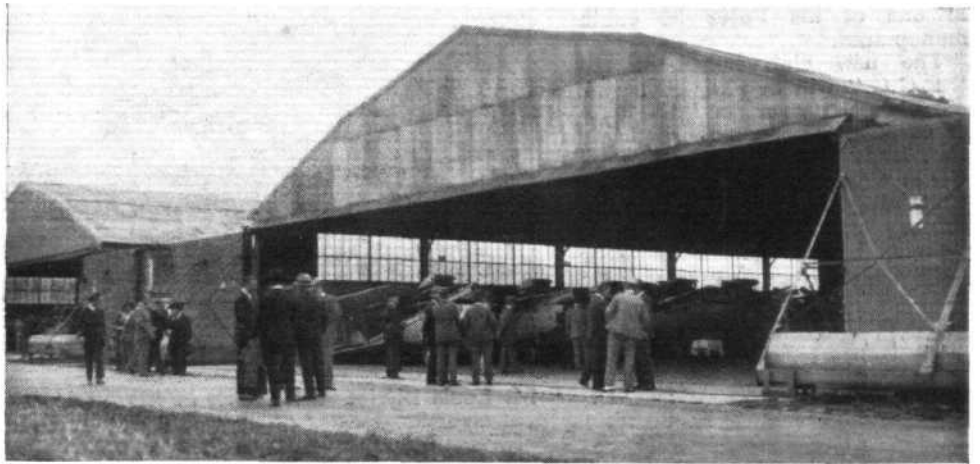


## ROLAND GARROS CLUB HOUSE, ORLY

**A**N important step for the encouragement of tourist aviation in France was taken on Tuesday, August 11 last, at the Orly Airport, when M. Etienne Riche, the Under-Secretary of State for Aviation, laid the corner stone of the club house for the new section of the Aero Club of France, known as "The Roland Garros Groupement de Tourisme." This section of France's premier aero club has been organised to aid the development of private flying and to furnish the facilities in the Paris district so much desired by tourist pilots.

Created only about one year ago, and named after the famous airman who did so much to aid the development of aviation in France, the "Roland Garros Groupement" has met with a most encouraging success. Some 170 members have been enrolled. Two good sized hangars have been secured at the Orly airport and another one will be shortly added to accommodate the increasing number of planes. The fleet of the "R.G.G." now consists of 41 tourist machines, which belong to the individual members, and are equipped with motors having some 4,300 h.p. in the aggregate. Twenty-eight of these planes are "garaged" in the Orly hangars. The "R.G.G." has, in addition, purchased three light tourist planes, which are at the disposal of members who desire to fly, but who have not as yet acquired their own machines. These planes comprise a Potez 36, a two-seater cabin monoplane equipped with a 95-h.p. Renault air-cooled motor, a Caudron 232, a two-seater open-cockpit biplane, also equipped with a Renault 95-h.p. air-cooled motor, and a Morane Saulnier "Moth," the well-known two-seater open-cockpit biplane, built under licence in France and equipped with 85-h.p. "Gipsy" air-cooled engine. A maintenance and repair force consisting of two mechanics and two helpers, under the direction of Antoine Maillet, an experienced pilot, are also on hand to maintain the "R.G.G." planes in proper flying condition.

A large attendance witnessed the laying of the corner stone of the new club house. Colonel Andre Watteau, one of the directors of the "Groupement," acted as chairman, opened the proceedings and welcomed the guests. He was followed by Mlle. Susanne Deutsch de la Meurthe, the president of the "R.G.G.," who gave a short description



One of the hangars of the "Roland Garros Groupement" at Orly.

of the growth of the "Groupement" and of its present and future plans. M. Etienne Riche, the Under-Secretary of State for Aviation, was the next and last speaker. He emphasised the interest that the Air Ministry took in the development of tourist aviation and stated that the question of establishing additional airports and landing fields throughout France was a most essential one; that it was being carefully studied, and that he expected a plan would be announced soon. The Minister further stated that a Committee had been appointed with M. Louis Couhe, the Inspector-General of Commercial Aviation, as chairman, to formulate a new set of rules to govern the licensing of tourist planes. In conclusion, M. Riche expressed great confidence in the development of private flying, and congratulated the members of the Roland Garros on the substantial progress that they had already made. The traditional parchment, signed by prominent people present, was then placed in a tin box, together with some coins of 1931 "vintage," and deposited in a niche of the corner stone, which was laid in place and the niche sealed up by M. Riche with a silver trowel.

Among the well-known people attending the ceremony were Colonel Antoine Brocard, chairman of the Military Aviation Committee of the Chamber of Deputies, M. Louis Couhe, Inspector-General of Commercial Aviation, M. Leon Ritor, chairman of the Aviation Committee of the Municipal Council of Paris, Dr. Marie, Mayor of Orly, Henry Chollat, Secretary-General of the French Associated Aero Clubs, and Mme. Jaffeux-Tissot, secretary of the Contest Committee of the Aero Club of France. M. Louis Blériot flew over from Suresnes in his new Blériot Guillemen light tourist monoplane, piloted by Lucien Bossoutrot, his chief pilot, and M. Henry Potez, president of the Aero-plane Constructors' Association, also arrived by air.



**THE BIRTH OF THE CLUB HOUSE:** On the right, M. Etienne Riche, Under Secretary of State for Air (standing beside the table), laying the corner stone of the Roland Garros Club House at Orly. On the left, Col. Andre Watteau, Vice-President of the "R.G.G." delivering the opening address. M. Riche is at his right, and Mlle. Susanne Deutsch de la Meurthe (President) is in the centre (in white coat).

in one of his Potez 36 cabin monoplanes.

The new club house of the "R.G.G." will be situated at the north-west corner of the Orly aerodrome, facing on the highway that leads to Paris. It will consist of a two-storey stone building containing a large lounge and reading room, a dining room, lockers, baths, etc. A repair shop and a small garage will be installed in the basement. The business offices of the "Groupe-ment" will be located at the Aero Club of France Building, 6, Rue Galilee, in Paris.

R. C. W.



M. Louis Blériot visited Orly in his Bleriot Guillemain Monoplane (95 h.p. Renault) piloted by Lucien Bossoutrot.

## THE MANCHESTER LIVERPOOL INTER-CITY AIR RACE

### FROM MANCHESTER

**T**HE pessimists were right. The weather was awful. For days gloomy souls had prophesied rain, wind, clouds and fog, and Northern Air Lines had said (speaking from experience) that as there had been 27 wet week-ends already this year, surely the law of averages . . .

Friday, August 14, provided a record rainfall for any one day in the past 35 years, and on Saturday morning Barton Aerodrome awoke to promises of another record. About 10 a.m. the *Cutty Sark* arrived *en route* for Ireland, and the pilot had considerable difficulty deciding if he should use the undercarriage or rely on his hull. Large flocks of seagulls—normally residents of Liverpool—came to Barton to cheer their fellow townsmen; unfortunately, two of these flew into propellers, one of a Moth and the other into the *Cutty Sark*; the pilot of the Moth descended hurriedly into the centre of Lake Davy.

Promptly at 1 p.m. Sq.-Ldr. Williamson and Flt.-Lt. Damant arrived from Sealand and reported even worse conditions around Chester. The activities increased; police, aldermen, gatekeepers, starters, and the man who had paid for admission sheltered in the hangar. The Racing Committee waited anxiously. It is a strange thing, but there seems to be a certain type of competitor who delights in causing unnecessary trouble. Copies of rules had been sent to all entrants. Rule 15 stated clearly that all competitors must be at Barton not later than 2 p.m., yet at 2 p.m. only Miss Brown and Mr. Naylor had arrived. It is true that the others drifted in a few moments afterwards, but business men and R.A.F. officers who have given up their Saturday do not deserve to be treated with discourtesy. Followed a thorough examination of the

competing aircraft, all were found to be as stated in their entry forms, except for one, who was using stub exhausts instead of the usual long exhaust pipe. Capt. Dancy had, however, provided for just such an emergency by giving an alternative handicap, and the Racing Committee added 1 min. to G-EBMQ. The competitors were then called into the hangar office and formally warned as to low flying, and asked were they quite clear about the rules, turning points, etc. There seemed no difficulties, and the good-tempered sporting spirit did much to console the Racing Committee for their thankless duties.

At 3.20 the competing machines were lined ready for the start. Our old friend, Mr. R. Lumby, was the official starter and timekeeper, with Sq.-Ldr. Williamson, Flt.-Lt. Damant, Maj. Cundiff and Mr. Leeming as Royal Aero Club stewards and referees.

There were two non-starters, F. R. Walker, Gipsy Moth, and Dr. Levitt, Gipsy Moth, both of Liverpool.

The machines went off in the following order:—

Dr. Peacock, Liverpool, Avian (Cirrus II) . . . . .	3.30	
B. A. G. Meads, Manchester, Moth (Cirrus II) . . . . .	3.32	33
T. P. Gleave, Liverpool, Moth (Gipsy I) . . . . .	3.37	44
R. F. Hall, Manchester, Avian (Hermes II) . . . . .	3.44	55
Miss Brown, Manchester, Avian (Hermes II) . . . . .	3.45	52
T. H. Naylor, Liverpool, Pass Moth (Gipsy III) . . . . .	3.49	48

The Manchester machines carried blue streamers and the Liverpool machines red streamers.

Then followed a "non-stop Pageant." Northern Air Lines have had by now so much experience in running these displays that all waits and pauses have been cut out, one turn beginning as the last one ends. There was a formation flight, the centre machine carrying 46-ft. banners trailing from each wing, a display of simultaneous stunting by two pilots in Moths, each looping and rolling at the same time, and some upside down flying by Mr. W. McKay, so perfectly performed



AT HOOTON: Some of the competing machines at Hooton Control.





Mr. T. H. Naylor (Liverpool) and his "Puss Moth" at Hooton.

The rain commenced again, the public drifted away, and the visiting aircraft took-off in clouds of spray. The Airport of Manchester resumed normal business.

J. F. L.

#### FROM LIVERPOOL (HOOTON) CONTROL

As the scene of the start and finish of the Inter-City Air Race this year was at Barton, with a one-hour's control at Hooton, the Liverpool Club decided not to

stage any special programme of flying events during the afternoon.

Instead, the aerodrome was opened to the public, and a goodly crowd assembled despite the highly erratic weather conditions. The Wirral Polo Club, whose pitch is upon Hooton Aerodrome, had arranged a Gymkhana, which was much appreciated by the spectators whilst awaiting the appearance of the competing machines.

Jupiter Pluvius had apparently repented his surly behaviour throughout the week, but there was an interval of bright sunshine when, a little after 4 p.m., the loud speakers forecasted the arrival of the leading machines. A few minutes later a biplane appeared from over Garston. Within a few seconds the machine was seen to be a Moth, and Liverpool's hopes of ZM, beating the handicap fell to the ground. As the machine crossed the line at 4 hr. 9 min. 52 sec. it was recognised as MQ, the Lanes. Club's ancient, but still-very-much-alive, Moth, followed, after an interval of 1 min. 4 sec. by ZM., the Liverpool Avian. The remaining machines arrived in their order of starting, the last machine (Puss Moth NO., Naylor, Liverpool Club) crossing the line at 4 hr. 17 min. 18 sec.

As soon as times became available, it was evident that Miss Winifred Brown "had the race in her pocket," as her machine was the only one beating the handicap by any considerable margin.

Competitors reported good weather conditions round the course, and proceeded to mingle with the interested crowd.

Miss Brown took on more petrol and remarked that ED. "did not seem to be going too well." Peacock's remarks anent ZM. were similar, but much stronger.

After the scheduled stop of one hour, the machines restarted for Barton, via Woodford, without incident. Our old friend, Mr. J. Pluvius, however, determined to be among those present, and put in a belated, but none the less vigorous, appearance as Gleave was taking-off in BA., with the result that the last three machines left in a torrential downpour which reduced visibility to about 800 yds. Thus ended proceedings at Hooton, with the crowd quickly scattering for cover, whilst some wit in the loud speaker van had the bad taste to put across the record "Would you like to take a walk? Do you think it's gonner rain?" "JOYSTICK."

that one wondered if something had gone wrong and he could not return to normal. The aerial skittles followed, and this, advertised as "a thrill," certainly proved to be one; it delighted the crowd and terrified some of us. Mr. Draycott, a mechanic employed at Barton, then gave a display of wing walking; this is not a sport that one enjoys in the ordinary way, but Mr. Draycott is something different, and he was deservedly cheered long and loudly by the crowd. Finally, there was a display of towed gliding by Mr. L. Beardmore. The glider was towed into the air by a Lynx Avro, and the novelty pleased the public immensely. No "turn" in the Pageant took longer than seven min., and there was no waiting between the events; as one of the Papers described it, "The Air Pageant with a snap in it."

It was announced on the loud speakers that the competitors had left Hooton and the race officials took their places on the finishing line. The joy-riding aeroplanes were stopped—all Barton waited. Just at the time the first machine was due, a pilot (name unknown) on a Westland Widgeon took-off and commenced to zoom and play around the aerodrome. Before he could be flagged down there was a drone—a machine in sight, a roar, Miss Brown on G-ABED! Consternation! she had passed the cross marking the finishing line on the wrong side, and failed to cross the finishing line. Before she could land and be told of her mistake, another roar, and Hall, on G-AAWI, had crossed the line. A few moments later three machines in a bunch roared across. A finish that confirmed the reputation—if confirmation were needed—of Capt. Dancy's skill in handicapping.

The finishing times were:—

	H.	M.	S.	Speed, m.p.h.
Manchester—				
Miss Brown ...	5	37	41	117.4 (Disqualified)
R. F. Hall ...	5	38	19	114
Liverpool—				
T. P. Gleave ...	5	40	10	97.5
T. H. Naylor ...	5	40	13	120.6
Manchester—				
B. A. G. Meads ...	5	40	15	89.9
Liverpool—				
Dr. Peacock ...	5	44	49	81.3

There was a protest from Miss Brown on the grounds that she had not been properly instructed as to the position of the finishing line. But the referees maintained that as all the other five competitors had crossed correctly, and all the pilots stated that they were clearly informed, the protest was dismissed.

The Cundiff Trophy was therefore presented to R. F. Hall—entrant, The Lancashire Aero Club—and the Reynolds Cup (team prize) to the Liverpool Team.

Miss W. Brown's "Sports Avian" fills up with National Benzole at Hooton.



## A MEETING AT SCARBOROUGH

ON Saturday last, August 15, the Scarborough Aero Club held an Air Pageant and Rally. Over 1,000 visitors gathered on the Racecourse for the event, the early part of which was favoured with a little sunshine, although thunder threatened and a heavy storm broke later in the afternoon.

An interesting and comprehensive programme had been arranged, but, owing to bad weather conditions prevalent between Scarborough and London, many aircraft, whose arrival had been expected, were prevented from coming. About thirty 'planes were expected, but only six arrived. Two prizes for those arriving nearest to a sealed time, and also one for the first lady pilot to arrive, were awarded by local firms. These were won by Mr. C. Clarkson in a Moth, Capt. Clayton in a Bluebird, and Miss Joan Page in a Redwing.

After the Fly Past of the machines, Capt. Clayton in his Bluebird gave an aerobatic demonstration. His machine was the one which the Hon. Mrs. Victor Bruce used on her round-the-world flight and was also similar to the one used by the winner of the King's Cup Race. The demonstration comprised a series of loops and stall turns, and ended with a spectacular dive.

The next item, which especially appealed to Scarborough's young visitors, was a balloon bursting competition. It was unfortunate that more aircraft were unable to take part.

A demonstration of towed gliding was then given by Herr Magersuppe. A Rollason Aircraft Co.'s Avian towed Herr Magersuppe in a glider to a height of about 800 ft. The glider was then released, and Herr Magersuppe, having first circled round the aerodrome, made a perfect and well-controlled landing.

Mr. Clarke (Rollason Aviation Co.) drew many gasps from the crowd when he gave an exhibition of wing walking. He crawled along the wing of the machine, attained a sitting position between the struts, and then returned to the cockpit.

Miss Joan Page, who about a week ago obtained her "B" licence, gave a demonstration of stunts and slow flying. The machine she used was a Redwing two-seater, with an Armstrong-Siddeley-Genet engine and side-by-side seating.

One of the items most exciting to the spectators was a parachute descent by Flt.-Sgt. Fairlie from Hendon. Mr. Fairlie was taken up in an Avian, piloted by Mr. H. Marsden (Rollason Aviation Co.), to a height of between 1,500 and 2,000 ft. He carried out an excellent descent in full view of the spectators, landing in an adjacent road.

A diversion from the flying events was made by an item entitled "A Non-Flying Thrill," in which Mr. Hall, of Hull, drove a high-speed motor bicycle through a frame containing a sheet of plate glass.

A demonstration of "bombing the car" was given, and amusement was caused when Mr. Payne, of Croydon, scored a direct shot with one of his "bombs" of flour on the moving "baby" car.

Herr Magersuppe gave another exhibition of gliding, and more stunt and other types of flying were shown before the completion of the programme. The latter part of this was, however, somewhat spoilt by the imminence of the storm, which, when it broke, was very violent. It was very unfortunate that the Pageant, the second venture of the Scarborough Aero Club (Chairman, Mr. F. Morgan; Secretary, Mr. W. Baynes), should have been marred both by the non-arrival of so many expected aircraft and the gathering of the storm.

P. C. C.

NEWCASTLE-UPON-TYNE AERO CLUB.—The Grosvenor Challenge Cup Race will be held at Cramlington Aerodrome on August 22. At this meeting there will also be an arrival competition with the zero hour at 12 noon, and the heats for the race will be run between 12.30 and 2.30 p.m. The entrants for the Grosvenor Cup Race are:—

THE CARDIFF AEROPLANE CLUB are holding a pageant at Splott Aerodrome, Cardiff, on Saturday, September 19. This will be in the nature of the official opening of the club. Among many other attractions there will be a race from London to Cardiff, open to all comers on handicap. The first prize will, it is hoped, be £100.

Ref. Marks	Machine	Engine	Pilot	Entrant
G-ABAG ..	Gipsy Moth ..	Gipsy I ..	T. C. Fawcett ..	T. C. Fawcett.
G-AAHE ..	Avian ..	Cirrus III ..	A. P. C. Johnson ..	A. P. C. Johnson.
G-ABIX ..	Arrow-Active ..	Hermes IIB ..	Flt./Lt. C. Wincott ..	C. R. Belling.
G-AAOC ..	Bluebird ..	Hermes I ..	D. Atcherley or A. M. Longmore	A. M. Longmore.
G-ABMA ..	Gipsy Moth ..	Gipsy II ..	H. R. Murray-Phillipson ..	H. R. Murray-Phillipson.
G-ABED ..	Avian ..	Hermes II ..	Miss W. Brown ..	Miss W. Brown.
G-EAUM ..	Avro Baby ..	Cirrus I ..	H. R. Edwards ..	H. R. Edwards.
G-AAZF ..	Comper Swift ..	Pobjoy "R" ..	Sqd./Ldr. J. Robb ..	Capt. G. Fane.
G-ABCI ..	Klemm ..	Cirrus III ..	D. I. M. Kennard ..	D. I. M. Kennard.
G-EBWI ..	D.H.60 X ..	Cirrus II ..	C. W. Duffie ..	Newcastle Aero Club.
G-EBUZ ..	D.H.60 X ..	Cirrus II ..	C. Thompson ..	Newcastle Aero Club.
G-EBQV ..	D.H.60 ..	Cirrus II ..	F. P. J. McGevor ..	Newcastle Aero Club.
G-AAHV ..	Spartan ..	Hermes I ..	Miss C. Leathart ..	Miss C. Leathart.
G-AAUC ..	Bluebird ..	Hermes I ..	F./O. E. Edwards ..	R. McAlpine.
G-AAUU ..	Bluebird ..	Gipsy I ..	H. Peak ..	H. Peak.
G-ABAH ..	Gipsy Moth ..	Gipsy II ..	L. M. J. Balfour ..	L. M. J. Balfour.
G-ABBH ..	Martlet ..	Genet II ..	F./O. H. Leech ..	F./O. H. H. Leech.
G-AAHP ..	Gipsy Moth ..	Gipsy I ..	Lord Douglas Hamilton ..	Lord Douglas Hamilton.
G-AADE ..	Widgeon ..	Gipsy I ..	C. S. Napier ..	C. S. Napier.
G-EBRO ..	Widgeon ..	Cirrus III ..	J. G. Ormston ..	J. G. Ormston.
G-AAJR ..	Comper Swift ..	Pobjoy "R" ..	H. C. Mayers ..	H. C. Mayers.



Members of the Herts and Essex Flying Club before taking off on a recent flight to Paris.



# AIR TRANSPORT



## FOCKE-WULF A38 "MÖWE"

**D**ESIGNED and built by the Focke-Wulf Flugzeugbau, of Bremen, Germany, the A38 "Möwe" is a development of former well-known Focke-Wulf types, such as the A17 "Möwe," of 1927, and the somewhat later A29. The new machine has been designed especially with Deutsche Luft Hansa requirements in view, and the first four machines of the type are on order from that company.

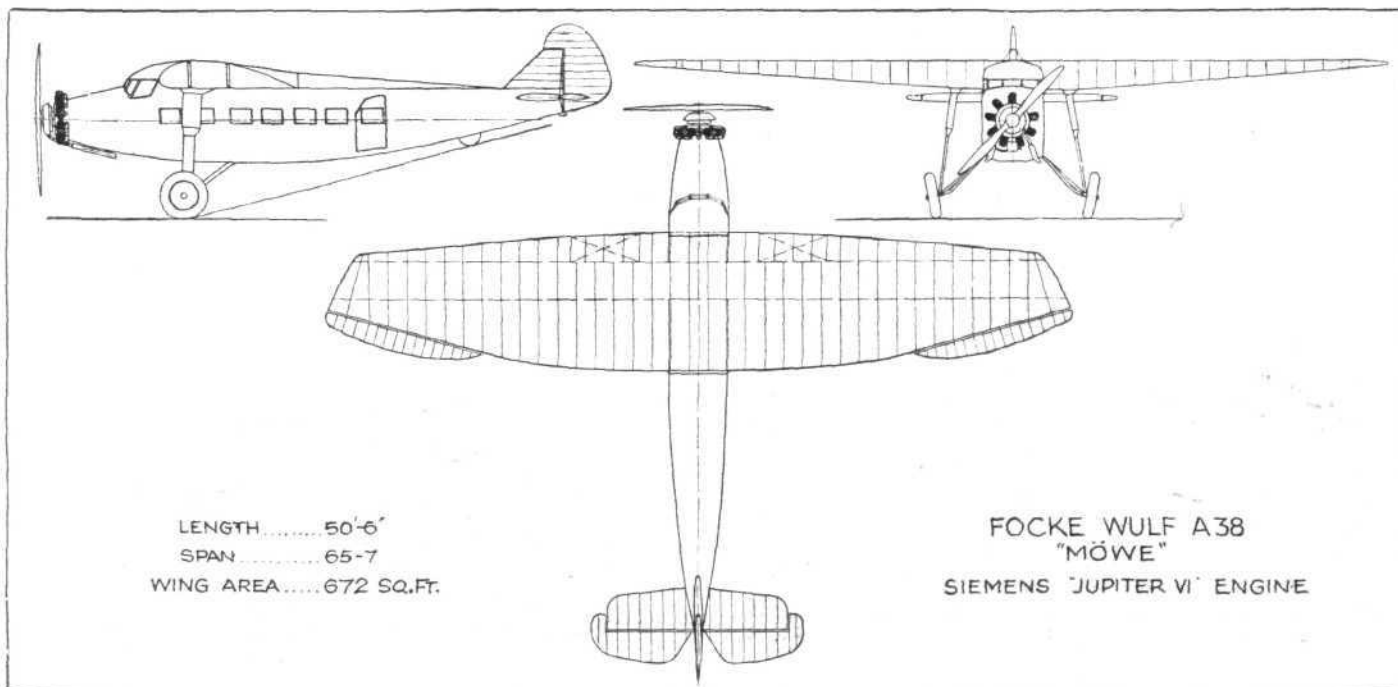
A single-engined high-wing cantilever monoplane, the A38 "Möwe" is designed for a crew of three and 10 passengers, but if desired the cabin equipment can be removed and the machine used for carrying freight. The wing is, as in previous Focke-Wulf, of Zanolina form, which has been found to give quite remarkable lateral stability up to very high angles.

Compared with previous "Möwe" models, the following alterations have been made: The fuselage lay-out has been changed so that the cabin no longer communicates directly with the cockpit but is separated from it by a luggage compartment, which has a door in the side and

one giving access to the cockpit, so that the crew can get on board without going through the cabin. The engine mounting is now so arranged as to give a certain amount of springing for damping vibrations. The rudder and elevators are made of steel tube, so that wood is now only used in the main wing and the tail plane. The tank arrangement has been altered, and the undercarriage has been redesigned and the wheels fitted with brakes.

The wing construction is identical with that of earlier Focke-Wulf machines, with two box spars of wood and a covering of plywood.

In the construction of the fuselage use is made of steel tubes, joined by welding, and the covering over the greater portion is doped fabric. The cockpit is placed immediately behind the engine bulkhead, and below and ahead of the leading edge of the wing. Triplex windscreens and windows afford protection for the crew. Behind the cockpit is the luggage compartment, which has a capacity of some  $2\frac{1}{2}$  cubic metres (88 cu. ft.). A door in the rear wall communicates with the cabin, which has a length



of 4.5 m. (14 ft. 9 in.), a width of 1.5 m. (4 ft. 11 in.), and an average height of 1.7 m. (5 ft. 7 in.). When the machine is used as a freight-carrier, the whole of the cabin space is available, while part of the interior of the wing roots can also be used for the stowage of goods. Behind the cabin is a lavatory, the door of which is so arranged that when the machine is on the ground nearly all of the lavatory space becomes available for entering and leaving the cabin.

An undercarriage of the "split" type is used. The telescopic legs are anchored at their upper ends to the wing, and springing is by compression rubber blocks. Wheel-brakes are fitted, and instead of the tail skid there is a castor-action tail wheel with Goodyear low-pressure tyre.

The engine fitted as standard on the A38 "Möwe" is a Siemens "Jupiter" of 500 h.p., with propeller reduction gear. Other engines, such as

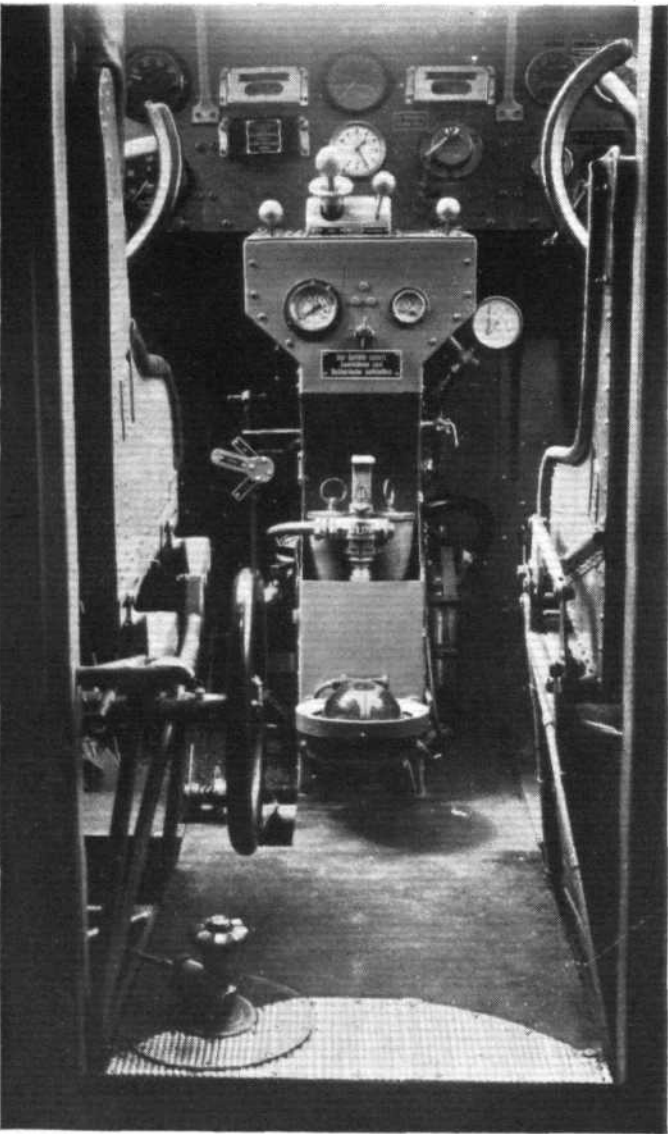


IN FLIGHT: The Focke-Wulf A38 "Möwe." The machine shows the usual wing plan form adopted by this firm from the Zanon seed leaf.

the BMW VI or the Siemens Sh. 20, can be fitted if desired. The petrol tanks are housed in the leading edge of the wings, and have a capacity of 400 litres (88 gallons) each. Normally the tanks are not filled to capacity, but carry in all some 110 gallons (55 gallons each), which gives a range of 465 miles (about 4½ hours). If the tanks are filled the range is correspondingly increased, but the pay load reduced. Fuel supply to the engine is by direct gravity feed.

From the fact that the Everling "High-speed Figure" has a value of 18.3, it is seen that the minimum drag is fairly low, while the ratio of gross weight to tare weight is 1.63, which is about normal for a machine of this type, certainly not exceptionally high for a machine with a relatively high wing loading.

In the table below will be found all the main data relating to the "Möwe."



THE COCKPIT: View from the forward luggage compartment, showing dual controls, etc.

FOCKE-WULF A38 "MÖWE"

Siemens "Jupiter" VI, 500 h.p.

Dimensions

Length o.a.	..	..	50 ft. 6 in. (15,4 m.).
Wing span	..	..	65 ft. 7 in. (20,0 m.).
Height	..	..	17 ft. 5 in. (5,3 m.).
Wing area	..	..	673 sq. ft. (62,5 m. <sup>2</sup> ).

Weights

Weight of machine bare	..	4,840 lb. (2 200 kg.).
Equipment	..	1,100 lb. (500 kg.).
Tare weight	..	5,940 lb. (2 700 kg.).

Non-paying load, 1,408 lb. (640 kg.) :—

Pilot	..	176 lb. (80 kg.).
Engineer	..	176 lb. (80 kg.).
Wireless operator	..	176 lb. (80 kg.).
Petrol (4½ hours)	..	792 lb. (360 kg.).
Oil	..	88 lb. (40 kg.).

Paying load, 2,330 lb. (1 060 kg.) :—

Ten passengers	..	1,760 lb. (800 kg.).
Luggage and freight	..	572 lb. (260 kg.).
Total load	..	3,738 lb. (1 700 kg.).
Gross weight	..	9,678 lb. (4 400 kg.).
Wing loading	..	14.4 lb./sq. ft. (70,3 kg./m. <sup>2</sup> ).
Power loading	..	18.9 lb./h.p. (8,6 kg./h.p.).

Performance

Maximum speed	..	126 m.p.h. (204 km./hr.).
Cruising speed	..	104 m.p.h. (168 km./hr.).
Landing speed	..	47 m.p.h. (75 km./hr.).
Absolute ceiling	..	11,500 ft. (3 500 m.).
Service ceiling	..	10,200 ft. (3 100 m.).

Climb times :—

3,280 ft. (1 000 m.)	in 7.8 minutes.
6,560 ft. (2 000 m.)	in 18.6 minutes.
9,840 ft. (3 000 m.)	in 37.3 minutes.

Ratio gross weight : tare weight	..	1.63
Everling "High-speed figure"	..	18.3



### Air Mail for Czecho-Slovakia, Poland and Turkey

The Civil Aviation Section of the London Chamber of Commerce learns that the 2.30 p.m., latest time of posting at the General Post Office, London, for air-mail letters to Czecho-Slovakia and Poland, has been changed to 3.30 p.m., and correspondingly later elsewhere. This is one hour later than the previous time of posting, and letters by this service leave daily, except Saturdays, and are due for delivery in Prague during the following afternoon. This service, which is operated from Paris during the summer months by the C.I.D.N.A. Company, is also now available for Air Mail correspondence for Turkey. The latest time for posting is the same, viz., 3.30 p.m. at the G.P.O. The combined rate of postage is 4d. for the first oz. and 3d. each subsequent oz. The route followed is via Prague, Vienna, Budapest and Belgrade, and the Air Mail is due at Constantinople about 12.30 p.m. on the third day. This service to Turkey should save about one day over the surface route.

### Air Services in Siam

The Aerial Transport Company of Siam is opening a new air line, and has received its first two machines from Europe. Its main aerodrome is at Korat, and the services will be north-eastward to areas which are as yet not served by railways. Later it will connect with the main Europe services at Rangoon.

### French Air Services in Africa

The *Rand Mail* announces that the Portuguese Government has granted powerful French interests a monopoly of aerial transport in Portugal's African possessions for 30 years. Taking into account the expansion of French air services in Africa and the recent Franco-Belgian air agreement, it is claimed in the Union that the agreement



THE NEW HANDLEY PAGE 42, WESTERN MODEL: An interior view of the aft cabin looking aft. This machine accommodates 38 passengers. (Flight Photo.)

gives France virtual control of Africa and puts her in a commanding position with regard to the South African Union.

### International Society of Airways Congress

Representatives of practically every country in Europe, including Soviet Russia, are to be present at the International Society of Airways Congress to take place in Budapest on September 9 and 10. France is sending five delegates, Italy four, Czecho-Slovakia two, and the other countries, including Great Britain and Russia, one each. The League of Nations and the International Chamber of Commerce are also to be represented.

## ROYAL AERO CLUB'S NEW HOUSE

THE new premises of the Royal Aero Club at 119, Piccadilly—until recently the Club House of the Cavendish Club—were taken over from that club on the 31st ult., when re-decoration immediately began.

It is hoped that all will be ready to open the House for the Royal Aero Club on or about September 21 next. The actual date of closing 3, Clifford Street will, it is hoped, synchronise with the opening of the new premises.

The new Club House is pleasantly situated, the Club rooms and many of the bedrooms overlooking the Green Park. The rooms are all light and airy. All floors are served by an electric lift.

The following Committee, termed the House Committee, has been appointed to organise and administer entirely the social and domestic side of the Club, under the direction of the Main Committee, with Mr. B. Stevenson appointed as House Secretary and Manager, who will be directly responsible to the House Committee:—

Colonel F. Lindsay Lloyd, C.M.G., C.B.E. (Chairman).  
Flight Lieut. G. G. H. Du Boulay.  
Mr. A. C. S. Irwin.  
Capt. A. G. Lamplugh.  
Lieut.-Col. Sir Francis K. McClean, A.F.C.  
Mr. J. Stewart Mallam.  
Lieut.-Col. D. C. Robinson.

The facilities which the new Club House will offer include:—24 bedrooms, reading and writing rooms, dining room, billiard and card room, cocktail bar, sandwich buffet, open during luncheon time, accommodation for lady guests, where teas or drinks can be served to members and their friends and periodicals provided, squash court (standard

size and make), changing rooms, baths and showers, tape machine, hairdresser.

The Committee hope that Members will do everything possible to make the new home of the Royal Aero Club a success. Members should appreciate that it is not only costing the Club a considerable sum on Capital Expenditure to move into 119, Piccadilly, but also it will cost a great deal more money yearly to administer and organise the Club than it has in the past at 3, Clifford Street.

The new rates of Subscription fixed at the Special General Meeting of the Members held on June 29 last are as follow:—

Town Members	... ..	£8 8s. 0d. per annum.
Country Members (i.e., Members living outside a radius of 50 miles and not having a London business address)	£5 5s. 0d. " "	
Officers serving in the Royal Air Force who are also Members of a recognised Service Club	... ..	£5 5s. 0d. " "
Naval and Military Officers attached to the Royal Air Force for service who are also Members of a recognised Service Club...	... ..	£5 5s. 0d. " "

These Subscriptions come into force on January 1, 1932, except for new Members elected after the opening of the new Club House, i.e., September 21, 1931, when the first Subscriptions will be at the new rates and cover the period to December 31, 1932.

# AIRPORT NEWS

## CROYDON

**T**HE week under review passed without an event of outstanding interest, except the weather—we certainly had a good variety.

Mr. George Harding, of Chicago, visited us again during the week, with his Fleetster, piloted by Mr. Brock. This machine resembles a Vega, and is often mistaken for one. Mr. Brock is disgusted with the English weather, and considers all the pilots in the airline business are stout fellows. We agree. It is doubtful if there is anywhere else in the world where the same weather conditions prevail; and yet every day the pilots of the European airlines get through, despite the weather. Thick fog is about the only thing to beat them, but this dislocates all forms of transport.

On Saturday, a nasty accident was narrowly averted. One of Imperial Airway's Handley-Page 42 was standing in front of one of the Air Union Liore's, and both machines had their engines ticking over. Suddenly the H.P. 42 opened up, and a pair of portable steps standing in the slipstream were blown away before anything could be done. They hit one of the revolving propellers of the Liore.

Slight damage was done to the French machine, but the propeller, being metal, remained intact, and was not even bent. Luckily no one was hurt by flying fragments. There is a certain amount of selfishness about this sort of thing; I have seen pilots and ground engineers open up engines without troubling to find out if all is clear behind. One of these days I am afraid there will be a serious accident caused through this carelessness.

Hannibal is back at Croydon, and will be rebuilt here. The greater part of it was brought back during the night, and even then, I understand, it was a work of art to turn the corners with the cabin, owing to its length.

Hunno and Hadrian are hard at work, and are doing their share of the services.

Personal Flying Services are busy with special charter work, and joy-riding is about normal. The Rollason Aviation Company seem to be the most popular joy-riding firm; their Desoutter can be seen in the air all day.

The traffic figures for the week were:—Passengers, 1,286; freight, 101 tons.

P. B.

## MARCONI ROTATING BEACON TRANSMITTERS

### Station to be Erected at Rangoon

**M**ARCONI'S Wireless Telegraph Co., Ltd., announces that the Company has now acquired from the British Air Ministry the full rights and drawings for the design and erection of wireless beacon stations of the rotating type.

Experimental rotating beacon stations have been erected by the Marconi Company at Orfordness, Gosport and Farnborough, which, after having been submitted to rigorous and exhaustive tests by the Air Ministry, the Radio Research Board, and other authorities, have been the subject of very favourable reports.

The first station of this type to be built as a commercial contract is to be erected by the Marconi Company at Rangoon, to the order of the Rangoon Port Trust, as a guide to shipping using the busy channel to and from the principal port of Burma.

A special feature of the rotating beacon system is that it requires only an ordinary wireless receiver and a stop watch to enable a ship or aircraft to take bearings, and it is therefore likely that the system will prove of considerable value in augmenting still further the application of wireless to navigation, especially in connection with the smaller classes of ships.

The system makes use of a vertical closed loop aerial rotating at a uniform speed of one revolution in 60 sec. The radiation from such a loop is at maximum in the plane of the loop and at minimum or zero at right angles to that plane.

For the calculation of bearings, two distinctive signals—a "north signal" and an "east signal"—are transmitted at regular intervals as the loop aerial rotates, the periods between them being occupied by a steady dash. The normal method of observation at the wireless receiving station is to start a stop watch at the moment the north

signal ends, after which the time taken for the zero signal to be reached will indicate the bearing of the observer from the beacon. If, however, the observer is practically due north or south of the beacon, he may not be able to read the north signal owing to the directional effect of the transmission, in which case the east signal is taken as the basis for calculating the bearing.

It is evident that, the speed of rotation being one revolution per minute, the number of seconds from the reception of the north signal to the reception of the minimum signal multiplied by six gives the bearing in degrees. The necessity for calculation can be avoided by having a stop watch graduated in degrees.

#### The Rangoon Installation

The rotating beacon to be erected by the Marconi Company at Rangoon will be similar to the station just built by the Air Ministry at Farnborough, which is of the most recent design and incorporates a number of new improvements.

It will operate on the wavelength of 1,050 metres (285 kilocycles) with a maximum power of 2 kilowatts to the anodes of the transmitting valves.

The system of operation will be to transmit a series of signals commencing at 15, 20, 35 and 50 minutes past each hour, the first minute of each transmission being utilised for signalling the identification letters of the station, V U R.

As practically all ships of any size using the port of Rangoon are fitted with wireless receivers, it is considered that when navigators have become accustomed to the operation of the rotating beacon, it may be possible to dispense with the lightship which at present serves the channel for navigation purposes. Thus wireless will take the place of visual observation.

#### Brian Lewis & C. D. Barnard, Ltd.

BARNARD'S activities, in spite of the depression about which we hear so much, the firm of Brian Lewis & C. D. Barnard, whose London office is 30, Conduit Street, W.1, have continued to sell quite a large number of both new and secondhand aircraft. Among those most recently delivered is a Puss Moth to the Parker Pen Co., who will use this in conjunction with their advertising agents, the First International Agency, a member of whose staff, Mr. A. S. d'Ydewalle, will pilot the machine, which will be used as an ordinary means of transport for their representative when visiting distributors all over Europe. Two new Gipsy I Moths have also recently been delivered to the Irish Aero Club, Baldonnell, while both Mr. Morris Jackman, the winner of the Siddeley Trophy, and Miss Crossley, who was the only woman pilot to finish in the recent King's Cup race, were supplied by this firm. Similarly, Major N. Nathan, who was exceedingly successful in the

Circuit of Italy flight, obtained his machine from this source.

#### Hardening and Tempering Furnaces

HARDENING, tempering and normalising are processes widely used by the aircraft manufacturer for both steel and light alloy raw material and components from which aircraft are built. For this purpose various forms of furnaces are used, among the best known of which are those made by Wild-Barfield Electric Furnaces, Ltd., North Road, Holloway, N.7. At the Shipping, Engineering and Machinery Exhibition to be held at Olympia on September 10—26 a full range of this company's furnaces will be shown on Stands Nos. 1 and 2, Row A. These will be in operation, and those interested will be able to see such important matters as the standard Wild-Barfield automatic temperature control and a demonstration of "eternite," which is a carbonising compound particularly free from dust and clean in use.



# AIRISMS FROM THE FOUR WINDS

## The Prince of Wales Tours in a Wessex

H.R.H. THE PRINCE OF WALES started off from Windsor Great Park on Tuesday, Aug. 18, on a tour to the South of France. He travelled in a Westland "Wessex" monoplane, which was piloted by Flight-Lieut. E. H. Fielden. Two R.A.F. flying boats escorted the "Wessex" from Lyme to the French coast. It landed at Le Bourget about 1 p.m. and left an hour later for Bayonne, landing at Tours en route. The Parmes aerodrome outside Bayonne was reached at 8.30 p.m., and the Prince motored out to Chateau Matignon, where he is to spend a short holiday with Lord Ednam.

## Sir Alan Cobham's Survey Flight

THE Nairobi correspondent of *The Times* reports that Sir Alan Cobham has completed his experimental seaplane flight over Central Africa and has returned to Entebbe. It is expected that he will start for home at the week-end. He states that his flight has been very satisfactory and that he expects to be able to submit to the Government a useful report on a route westwards from the Great Lakes to connect with Belgian services, and also on the behaviour of his machine, the Valetta.

## Mr. Chichester Crashes

MR. F. C. CHICHESTER, who was attempting a flight from Australia to England, via Japan, Canada, Greenland and Iceland, has come to grief. Having reached Kagoshima from Shanghai on August 13, he was proceeding from Katsura to Tokio on August 15, when he met with a nasty accident. He had experienced some difficulty in getting his "Moth" seaplane off the water, and had just succeeded at the third attempt, when the machine caught a telegraph wire while crossing the village and crashed into the sea wall. He was extricated from the wreckage unconscious and taken to hospital, where his injuries were found to be severe, but not serious. The machine was wrecked.

## Col. Lindbergh

COL. AND MRS. LINDBERGH, who are flying from New York to Japan in a Lockheed "Sirius" mono-seaplane, arrived at Nome, Alaska, on August 11, having made a forced landing on the north coast of the Seward Peninsula owing to bad weather. They left Nome on August 14, and, flying across the Behring Sea, reached Karaginsky Island, Kamchata Peninsula, early the following morning, a flight of over 1,000 miles.

## Herndon and Pangborn Fined

THE two American pilots, Herndon and Pangborn, who recently flew from New York to Tokio on a round-the-world flight, and were detained by the Japanese authorities for having flown over, and photographed, fortified areas, have been fined 2,050 yen (£200).

## The German Flight Across Greenland

HERR GRONAU, the German pilot, is making a survey flight for a Europe-America air route, and arrived at Reykjavik from Europe on August 9, having left Copenhagen on August 8. He arrived at Scoresby Sound, Greenland, on August 13. He intends to make Godthaab, on the west coast, his base, from which he will make a number of survey flights during the next few weeks.

## NOT Eaten by Cannibals

A WIRELESS message received by New Guinea Airways states that the body of Mr. L. J. Trist, the Australian airman, who has been missing for nearly two months in New Guinea, has at last been found in dense jungle by the side of his 'plane, which was badly damaged. The discovery of the dead airman finally discounts the fears that he had been killed and eaten by cannibals in the centre of New Guinea.

## Cruise of R.A.F. Flying Boats

ON August 17 a Short Singapore II. (four Rolls-Royce "Kestrels") and a Saro A7 (three "Jupiters") left Mount Batten on an experimental flight

to Aboukir and back. They arrived at Hourtin near Bordeaux the same afternoon.

## Polish Light Plane Records

It was officially announced by the Polish Technical Institute for Aviation that the world altitude record for light planes (2nd class, two-seater, 280 kg. without fuel), held by the French pilots Reginensi and Vizcaya, was broken on August 7 by the Polish pilot, Lt. Zwirko, on a R.W.D. machine, when he attained an altitude of 19,487 ft.

The speed record in the same category, also held by France, was in addition broken, on August 13, by the Polish pilot, M. Jerzy Drzewiecki, on a R.W.D.7, fitted with an 80-h.p. Armstrong-Siddeley "Genet." His speed was 180 k.p.h. (111.8 m.p.h.) over two laps of 50,685 km., his time being 33 min. 34 sec.

## R.A.F. Central Band

ALL lovers of music will be sorry to hear that Flight-Lieut. J. H. Amers, M.B.E., *p.s.m.*, Director of Music in the R.A.F. Central Band at Uxbridge, is retiring from the service. He has brought the Central Band to a high pitch of efficiency and smartness, and it has given great pleasure to many thousands. His place is being taken by Capt. R. P. O'Donnell, Director of Music, Royal Marines, Portsmouth Division and H.M. Yacht "Victoria and Albert."

## Further Tests on Monospar Wing

IN order to obtain further data on the behaviour of the monospar wing construction under unusual conditions, General Aircraft, Ltd., have recently had their little twin-engined machine tested by Fl.-Lt. Schofield, who reported on the test as follows: "On August 11 and 13 I carried out flying tests on G-AARP, after the fabric on both wings had been considerably slackened by three applications of the preparation especially supplied by Cellon, Ltd. The wing covering was inspected by A.I.D., and was considered to be totally unserviceable for flying. A slight loss of lift was apparent. On August 11 the machine was flown by stages to 170 m.p.h., and on August 13 to 155 m.p.h. The aileron control tended to become heavy towards the end of the scale. No diminution or sluggishness in aileron control was experienced. At 170 m.p.h. the response was immediate and positive. No undue movement of the wing or aileron was apparent. The wing should be stripped and re-covered before further flights are made, because it is not possible for the present covering to be made serviceable again." We understand that it is now proposed to carry out flying tests, with various wires removed, in order to demonstrate the large margin of safety of the monospar system of construction.



THE "GRAF ZEPPELIN" AT HANWORTH: Dr. Eckener acknowledges the cheers of the crowd from the control cabin of the airship after the latter had landed at Hanworth Air Park on August 18. A report of the airship's visit is given on page 830. (Flight Photo.)

# BOOK REVIEWS

## All About Air Travel

**N**O more comprehensive work on the world of aviation has ever been published than the first (1931) volume of *The International Air Guide*, which has just been issued by the well-known French publishers, Imprimerie Crete, of 2, Rue des Italiens, Paris 9<sup>e</sup>.

*The International Air Guide* is trilingual, the languages employed being English, French and German. The arrangement adopted is slightly unusual, but has been well thought out, and when once the "scheme" has been mastered—as it is after quite a short study—reference to any subject covered is very easy and convenient.

*The International Air Guide* is a work of reference embracing the whole of Europe, and, more briefly in this first volume, the Americas. All phases of aviation are dealt with, such as commercial aviation and the various air routes, passenger fares, regulations in force in different countries, aviation societies and institutions, air ports, and air maps, and so forth. Aircraft descriptions are not included, as these are already readily available in other publications.

In a foreword, Prince Bibesco, President of the Federation Aeronautique Internationale, outlines the manner in which the book has come into being, and calls attention to the arduous nature of the task of compiling such a work of reference, a task which is obviously not the work of one man, or of a few men, but the result of close co-operation of many. The Prince refers to the valuable help given by air line companies, by governments, and by the transit commission of the League of Nations.

*The International Air Guide* measures 10 in. in width and is about 12½ in. deep. The loose-leaf system of binding has been adopted in order to make it possible to keep the guide up to date by periodical addition of new pages. A work of this nature is of little use unless the information can be kept right up to date and obsolete matter removed. This is made possible by the arrangement chosen.

Part I deals with air transport, and gives information about general conditions and regulations, governing passenger, luggage and mail transport. Particulars are given, in a number of languages, of the air routes of Europe, and, more briefly, of those in Africa, Australia, and America. A section dealing with passport and customs regulations is particularly useful to air travellers, as is also a short note on insurance.

Air touring is dealt with in Section A of Part II, which tells the prospective traveller all he wishes to know about touring abroad. Sections B and C of this part deal with flying schools and statistics, respectively. Part III is devoted to other aerial activities, such as aerial photography and meetings, etc., while Part IV sets out in great detail the international air regulations in force and the national regulations in a large number of countries.

Ancillary services, recognised routes, air corridors, prohibited areas, and such like, are explained in Part V, which deals also with meteorological services and wireless. A very extensive list of airports is given in Part VI, with detailed maps of the airports, and maps showing their location in relation to the towns they serve. The airports are found under the name of the town and not under their own names. Thus Croydon is found under London, Le Bourget under Paris, and so on.

Maps showing the long-distance air routes are found in Part VII, while Part VIII is devoted to an alphabetical and classified index to advertisers.

Altogether *The International Air Guide* is a most remarkable work of reference, and should rapidly become invaluable to anyone who wishes to keep in close touch with air line developments.

A London office has been established at 6, Conduit Street, London, W.1 (Telephone: Mayfair 3163/4), where prospective purchasers may obtain further information.

## The Book of the Autogiro

**A**T 5s. net., "The Book of the Autogiro," published by Sir Isaac Pitman & Sons, Ltd., is good value. It has been written by Capt. A. H. Rawson, Cierva's Test Pilot, and Mr. C. J. Sanders, who has been in charge of the Cierva design staff at Hamble for a considerable period, and in the Foreword it is stated that Mr. Charles Dixon has put the manuscript in order for the printers

and carefully read through the proofs. Although the book deals specifically with the type C.19 Autogiro, it contains enough general information about the Autogiro principle to be valuable as a guide, in non-technical language, to anyone interested in the why and wherefore of this type of flying machine. It is never easy to be precise when technicalities have to be avoided, but that is scarcely an excuse for a sentence like the following, which is found on pp. 8 and 9: "The rotor system, which is essentially the chief characteristic of the Autogiro, and gives it its name, furnishes approximately most of the lift at high forward speed and 100 per cent. in vertical descent." The sentence does not indicate that Mr. Dixon has read the proofs quite as carefully as the Foreword would have us believe.

Apart from the quaintness of the expression "approximately most of," the technical accuracy of the statement that in vertical descent the rotor provides 100 per cent. of the lift seems open to challenge, for do we not find, on p. 17, the statement: "It has also been proved that not even in vertical descent do they (the fixed wings) approximate the stalling position, for they are still in the down wash. Tests were made by attaching threads to various parts of the wings. At all speeds, from vertical descent to high speed, the threads showed a change of angle of only a few degrees, and never approached an angle which would indicate that either wing was stalled." It is difficult to reconcile this statement with the first.

The latter parts of the book, which deal with such subjects as "How to fly the Autogiro," "Detailed Description," "Engine Installation" and "Rigging and Maintenance," are much more useful, although one cannot help feeling that the book is a little premature, dealing as it does with the C.19 type, which may soon be replaced, or at any rate augmented by a newer type. For all that the book is worth reading, and the section dealing with handling on the ground is very practical and should be carefully studied.

## Air Navigation for the Private Owner

**M**R. FRANK SWOFFER follows up his *Learning to Fly* with this new book on aerial navigation. He starts by explaining that when he himself was learning he had great difficulty in assimilating the heavier technical details, so he has, now that he comes to teaching others, left out such details where possible and made them as simple as he could do where it has been necessary to include them.

He certainly holds to his word, and throughout the book no one should have any difficulty in understanding his explanations, in fact, I feel that Mr. Swoffer has erred on the side of simplicity. For example, in his chapter on the Compass, there is no mention of such phenomena as "Northerly Turning Error," but, provided that the reader realises that such is the case and that for a full knowledge of the subject he must turn to other volumes, I feel Mr. Swoffer's book should be of value. At any rate, it will give young pilots a good grounding in the subject.

*Air Navigation for the Private Owner.* By Frank A. Swoffer, M.B.E. (Sir Isaac Pitman & Sons, Ltd.), obtainable from FLIGHT offices. Price 8s. post free.

## An Aviation Thrill

**I**T is only natural that detective yarns should now become modernised and introduce crooks who use aircraft, but when they do they nearly always become farcical to those who know an elevator from an aileron.

"Gamblers Throw" is, however, the exception, and it is evident from the beginning that Mr. Adams knows what he is writing about.

In the most natural way you are taken from the beginning, when the penniless hero is "barn storming" in an ancient Canuck, until the end when he and a pal get the better of a super-racketeer by means of a super aircraft.

He's a student of psychology, too, is Mr. Adams; so that altogether you get a novel with depth, length and breadth when you get your copy of "Gamblers Throw."

*Gamblers Throw.* By Eustace L. Adams (John Hamilton, Ltd.), obtainable from FLIGHT offices. Price 8s. post free.





# THE ROYAL AIR FORCE

London Gazette, August 14, 1931.

## General Duties Branch.

Lt. C. L. Keighly-Peach, R.N., is reattached to R.A.F. as Flying Officer with effect from July 25, and with seny. of April 27, 1925. The following Pilot Officers are promoted to rank of Flying Officer:—E. V. N. Bramley, H. F. Chester, A. W. R. Lawson, D. W. Lucke, W. B. Thompson (July 14); J. Boston (August 3); U. Y. Shannon, with seny. of August 3 (August 11); Flying Officer J. P. Domville is promoted to rank of Flight Lieut. (May 16); Flying Officer R. B. Whittingham is transferred to Reserve, Class C. (August 6); Flying Officer C. C. D. Williams is transferred to Reserve, Class C. (July 17). (Substituted for Gazette, July 21); Lt.-Cdr. D. M. L. Neame, R.N., Flying Officer, R.A.F., ceases to be attached to R.A.F. on return to Naval duty (July 26); Lt. A. C. G. Ermen, R.N., Flying Officer, R.A.F., ceases to be attached to R.A.F. on return to Naval duty (July 10). (Substituted for Gazette, July 7).

## Medical Branch.

The following are granted permanent comms. in ranks stated (August 12):—Flight Lieut. J. H. Cullinan, M.R.C.S., L.R.C.P.; Flying Officer C. G. Harold, M.B., B.Ch.; Flying Officer A. Sheehan, M.B., B.Ch. Flying Officer (Quartermaster) W. King is promoted to rank of Flight Lt. (August 9).

## Princess Mary's Royal Air Force Nursing Service.

Sister Miss H. W. Cargill resigns her appointment (August 6).

## ROYAL AIR FORCE RESERVE.

### Reserve of Air Force Officers.

### General Duties Branch.

K. Stuart-Smith is granted a comm. in Class C as a Pilot Officer (July 29). The following are granted comms. in Class AA (ii) as Pilot Officers on probation:—

## General Duties Branch.

**Group Captain.**—A. C. Winter, O.B.E., to R.A.F. Reception Depot, Ruislip, pending taking over command, 27.7.31.

**Wing Commander.**—T. L. Leigh-Mallory, D.S.O., to H.Q., Coastal Area, pending posting to Air Ministry, 28.7.31.

**Squadron Leaders:** G. E. Livock, D.F.C., A.F.C., to R.A.F. Depot, Uxbridge, 26.6.31. J. V. Read, M.B.E., to Home Aircraft Depot, Henlow, 30.7.31. C. R. Keary, to Home Communication Flight, Hendon, 17.7.31. A. C. Sanderson, D.F.C., to No. 19 Sqdn., Duxford, 13.7.31.

**Flight Lieutenants:** (Act. Sq. Ldr.) W. Elliot, D.F.C., to R.A.F. Depot, Uxbridge, 11.7.31. C. G. Wigglesworth, A.F.C., to R.A.F. Depot, Uxbridge, 26.6.31. R. H. Haworth-Booth, D.F.C., to R.A.F. Base, Gosport, 28.7.31.

batton:—J. A. S. Hodgson (July 20); J. D. Ronald (July 28). The following Pilot Officers on probation are confirmed in rank:—J. C. Corby (July 7); P. R. Nickols (July 9); K. J. Lawrence (July 23); J. F. H. Bulman (August 6); C. B. McNair (August 6). Pilot Officer J. C. E. Luard is promoted to rank of Flying Officer (July 30); Flying Officer R. K. Coupland is transferred from Class C to Class A (July 8); Flying Officer J. S. Snedden relinquishes his comm. on completion of service (May 15).

## Medical Branch.

Flying Officer C. J. MacQuillan, M.B., B.A., is promoted to rank of Flight Lieutenant (August 12).

## SPECIAL RESERVE.

### General Duties Branch.

J. Peel is granted a comm. as Pilot Officer on probation (July 17).

## AUXILIARY AIR FORCE.

### General Duties Branch.

No. 600 (CITY OF LONDON) (BOMBER) SQUADRON—The Hon. R. N. Frankland to be Pilot Officer (June 22).

No. 605 (COUNTY OF WARWICK) (BOMBER) SQUADRON—The following to be Pilot Officers:—W. C. Barnaby (July 15); F. W. Hancock (July 22).

No. 608 (NORTH RIDING) (BOMBER) SQUADRON—C. W. Wright to be Pilot Officer (July 21).

## ROYAL AIR FORCE INTELLIGENCE

**Appointments.**—The following appointments in the Royal Air Force are notified:—

## General Duties Branch.

**Group Captain.**—A. C. Winter, O.B.E., to R.A.F. Reception Depot, Ruislip, pending taking over command, 27.7.31.

**Wing Commander.**—T. L. Leigh-Mallory, D.S.O., to H.Q., Coastal Area, pending posting to Air Ministry, 28.7.31.

**Squadron Leaders:** G. E. Livock, D.F.C., A.F.C., to R.A.F. Depot, Uxbridge, 26.6.31. J. V. Read, M.B.E., to Home Aircraft Depot, Henlow, 30.7.31. C. R. Keary, to Home Communication Flight, Hendon, 17.7.31. A. C. Sanderson, D.F.C., to No. 19 Sqdn., Duxford, 13.7.31.

**Flight Lieutenants:** (Act. Sq. Ldr.) W. Elliot, D.F.C., to R.A.F. Depot, Uxbridge, 11.7.31. C. G. Wigglesworth, A.F.C., to R.A.F. Depot, Uxbridge, 26.6.31. R. H. Haworth-Booth, D.F.C., to R.A.F. Base, Gosport, 28.7.31.

P. J. R. King, to R.A.F. Depot, Uxbridge, 25.7.31. E. C. Dearth, to Home Aircraft Depot, Henlow, 27.7.31.

**Pilot Officer.**—J. G. Cardale, to No. 5 Flying Training School, Sealand, on appointment to a short service comm., 27.7.31.

## Stores Branch.

**Flying Officer.**—G. J. Gaynor, to Aircraft Depot, Hinaidi, Iraq, 12.7.31.

## NAVAL APPOINTMENTS.

The following appointments were made by the Admiralty yesterday:—LIEUT.-COMM. J. H. I. WOOD (F.O., R.A.F.), reattached R.A.F., and appointed to Victory, for f.i.d. in 443 Flight (Aug. 15).

LIEUTS. (F.O., R.A.F.).—G. WILLOUGHBY and C. W. PHILLIPS, to Courageous (Aug. 28 and Sept. 1 respectively).

## ELECTRICAL AND WIRELESS SCHOOL, CRANWELL

The following are extracts from the report by the Commanding Officer (Group Capt. R. H. Verney, O.B.E.) at the Passing Out Inspection on July 30, 1931:—

This entry is the fourteenth to complete the course. These 49 aircraft apprentices include 20 wireless operators' mechanics and 29 electricians.

Apart from this entry, there are a further 295 aircraft apprentices under training in the school.

The standard reached by this entry has been very satisfactory.

The Central Trade Test Board have examined all but two of the entry, with the following results:—

**Nineteen wireless operators' mechanics:**—Four L.A.C.'s, 10 A.C. 1's, and five A.C. 2's.

**Twenty-eight electricians:**—Seven L.A.C.'s, 13 A.C. 1's, and eight A.C. 2's. One wireless operator mechanic and one electrician were ill at the time of the Board's visit.

A satisfactory standard has been reached by the majority of the entry in general studies, electrical science, and in drawing office work. Forty-four out of the 49 qualified educationally for L.A.C. in the Passing Out Examination.

The rest of my report refers to "A" Squadron as a whole. The total admissions to hospital for the period January 1, 1931, to July 15, 1931, numbered 110. Of these, 73 cases were medical, 29 surgical, and eight were isolation cases. The medical cases were mainly cases of influenza and tonsillitis. The majority of the surgical cases were minor injuries, mostly attributable to organised games.

The new R.A.F. system of physical training has been continued with good results. A party of 50 aircraft apprentices volunteered to give a short P.T. display at the Grantham Agricultural Show on May 24, which was much appreciated, especially as they trained for it out of working hours.

**1st XI Soccer Team.**—The 1st XI terminated a successful season by finishing as runners-up in the Medals Competition in the Ruskington League, being beaten in the final round. The team played nine games, of which they won five, drew one, and lost three.

**1st XV Rugby.**—Played six games, won three and lost three.

**1st Hockey XI.**—Played four games; won one, drew two, and lost one.

**Cross-Country.**—On March 28 a match with a team of apprentices from Halton was arranged. The match, which was run at Cranwell, resulted in a win for Halton. The first man home was, however, A./A. Witt, of this squadron.

**Cricket.**—The squadron cricket team have played 14 games, of which 13 have been won and 1 lost.

## Cadetships.

A cadetship has been offered to R. R. Fairweather, winner of the "Hyde Thomson" Memorial Prize, which is awarded to the Aircraft Apprentice who obtains the highest place in the Passing Out Examination.

## Prizes.

The winners of the prizes given by the Air Ministry are:—**Highest Aggregate Prize**, to the aircraft apprentice who obtains the highest marks in all subjects, Leading apprentice L. R. Kirby. **Highest in Technical Subjects**, to the aircraft apprentice who obtains the highest marks in the Central Trade Test Board Examinations, Leading apprentice G. Ashfield. **Highest in Educa-**

tional Subjects, to the aircraft apprentice who obtains the highest marks in the Passing-Out Examination in Educational Subjects, Leading apprentice T. D. Dixon.

Air Vice-Marshal Newall, C.B., C.M.G., C.B.E., A.M., inspected the school, and in the course of his speech made the following remarks:—

This is the first occasion on which I have ever been permitted—ever had the opportunity of coming up here—to see the Electrical and Wireless School, and I am much impressed by what I have seen. A good deal of what is taught you is Greek to me, but I realise the ultimate use of it, and I have one or two remarks to say to you mostly in the nature of advice for the future.

As to your employment when you leave here, you may be employed in flying boats, with night bombers or day bombers, or night fighters or Army Co-operation Squadrons, or on point to point communication. No matter which one of these various employments you may be posted to, your functions are of equal importance in the particular sphere to which you are appointed. Wireless in connection with aircraft is constantly of increasing importance, and I think you will understand that it is quite useless for us to have fast aircraft with tremendous power, if we cannot rely on communications.

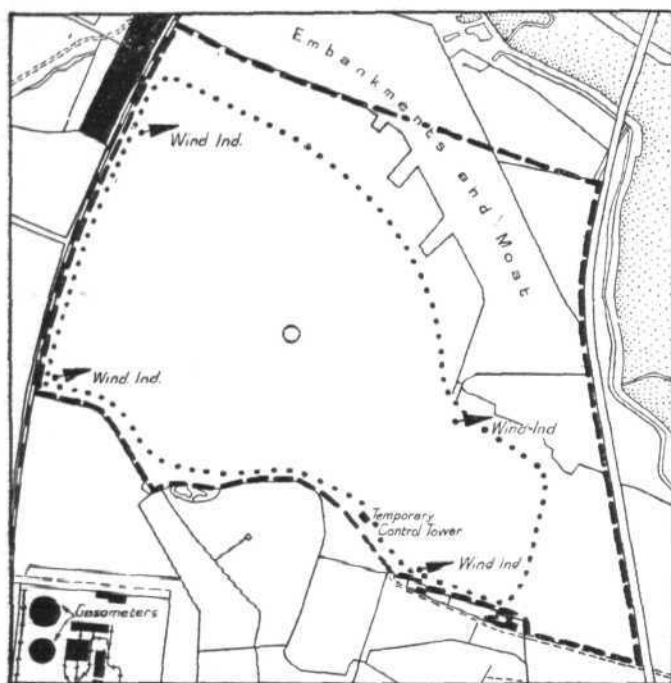
Now as to your responsibilities. Aircraft are becoming in many cases more costly, larger, and they carry a bigger crew. Frequently the safety of these aircraft rests on your individual shoulders. I hope, therefore, each one of you when you have left here, and are working in the Service, will realise your responsibilities. If you will always think of this responsibility not merely as a job to be done, but if you also think of it in terms of the lives of your comrades, you will naturally be more thorough in your work. These remarks apply not only to those who are going to be wireless operator mechanics, but in equal force to those who are going to be electricians. I would like to give you a little mental picture of your responsibilities, and I am speaking from experience as at the moment I have all the bombers under my command in this country, and therefore I think you will agree with me I am in a position to appreciate the extent to which we are dependent on the knowledge and sense of duty and the thoroughness which I feel confident this School has. Let us imagine for a moment a really fine night in the summer, and say there are some 30 or 40 aircraft flying on various exercises. A good many of them have inexperienced pilots and inexperienced crews. The actual night we are mentioning is perfect for the training of these inexperienced personnel. Well, in this country our climate is hardly to be relied on. Let us picture a situation which frequently arises. We are suddenly faced with a very dense fog. Now there is no doubt about it, each one of you here will probably almost certainly sooner or later be a member of a crew of an aircraft under those conditions. I am imagining a fog which covers a great area of country and makes a good many of the landing grounds and aerodromes either or both impossible to see and impossible to land on. Now I think you will be able to imagine what it would be to you as members of the crew, and not only to you but also to your Commander, if you had a feeling that you could rely absolutely on your wireless communication and thereby direct all these various aircraft not to land in the fog but direct them to safety by ordering them to land on other aerodromes in the country which are free from the fog. Just place yourself as a member of the crew of one of these aircraft in these conditions, and I think you will realise what I mean when I speak of your individual responsibilities, and I think you will also realise what it means to a Commander to be able to rely on his electricians and wireless operator mechanics.

# AIR MINISTRY NOTICES

## No. 45 of 1931. Portsmouth Aerodrome : Use in Connection with the Schneider Trophy Contest. (125395/31.)

Portsmouth aerodrome will be available for use on and after September 1, 1931, and will therefore be open for use by aircraft visiting the locality in connection with the Schneider Trophy Contest.

The aerodrome is still under construction and only a portion of the total area will be available for landing and taking-off by the above date.



SCALE 1:10,000  
100 0 100 200 300 400 500 Yards  
100 0 100 200 300 400 500 Metres  
Good Landing Area shown thus .....

A plan is attached showing the lay-out of the aerodrome as at September 1, 1931, and after that date. Brief details are given below.

(i) *Position*.—Lat. 50° 50' N., long. 1° 03' W., 2½ miles N.E. of Portsmouth, and ½ mile N.E. of the gas works.

(ii) *Description of landing area as at September 1, 1931*.—

*Size*—

N.-S.	746 yards.
N.E.-S.W.	700 "
E.-W.	800 "
S.E.-N.W.	1,140 "

*Surface conditions*.—Level, well-drained, grass-covered surface.

(iii) *Obstructions*.—

*N.E. side*.—Embankment and rough ground.

*S. side*.—Lopped trees, 10 ft. in height, 2 gasometers 140 ft. high, and several chimneys 100-130 ft. high, 350 yards distant.

*W. side*.—Railway with telegraph wires.

(iv) *Markings*.—A landing circle will be marked near the centre of the landing area.

Four wind sleeves will be flown from masts in the positions indicated on plan.

(v) *Owner*.—Portsmouth Corporation.

It should be noted that N/A Series C, No. 8/1931, which states that the use of this aerodrome is dangerous and should be avoided, will remain in force until September 1, 1931.

N.B.—Except during the period of the Schneider Contest, there will be no refuelling or other facilities until further notice.

## No. 46 of 1931. Schneider Trophy Contest : Arrangements for Visiting Aircraft. (125396/31.)

The Schneider Trophy Contest will take place, weather permitting, at Spithead and over the adjacent waters, on September 12, 1931.

Flight, in the locality of the Contest, of all civil aircraft other than those competing will be subject to restrictions which will be announced later.

The undermentioned Royal Air Force seaplane stations and aerodromes will not be available for use by civil aircraft from the date shown against each until another date, which will be notified in due course :—

Calshot Seaplane Station	August 24, 1931.
Lee-on-Solent Seaplane Station	September 10, 1931.
Gosport Aerodrome	September 10, 1931.

The undermentioned licensed civil aerodromes will be the official aerodromes for the purpose of the Schneider Contest and will be available for use by visiting civil aircraft subject to the restrictions shown against each.

(a) *Portsmouth Municipal Aerodrome*.

See Notice to Airmen, Series A, No. 45/1931. Available for aircraft (landplanes) of all types.

This aerodrome will be under the control of the Automobile Association. No hangar accommodation can be provided, but application for parking space should be made to the Aviation Department, Automobile Association.

(b) *Cowes (West) Aerodrome*.

Private licensed aerodrome available only for light aircraft (landplanes) entered in the Certificate of Registration as in Class A or AA for

landing fee, and for Avro 504.K, 536 and 548. The aerodrome will be under the control of the Automobile Association. No hangar accommodation will be available, but parking space for not more than 60 light aircraft can be arranged. Applications for permission to land and for parking space should be addressed to the Aviation Department, Automobile Association.

(c) *Cowes Seaplane Station*.

Private unlicensed seaplane station. Up to a maximum of 18 moorings for aircraft can be laid down by the station owners (Messrs. Saunders-Roe, Ltd.), but all applications for such moorings and assistance in connection therewith should be addressed to the Aviation Department, Automobile Association. At least ten days' notice should be given by any one requiring these moorings and no applications for them can be considered later than September 1.

Arrangements for the accommodation of civil aircraft will be made in the order of priority in which notification is received by the Aviation Department, Automobile Association, Fanum House, New Coventry Street, W.1. The Automobile Association will, on request, forward special forms covering certain necessary particulars of aircraft requiring accommodation.

## No. 47 of 1931. Schneider Trophy Contest : Practice Flying. (125397/31.)

Aircraft practising for the Schneider Trophy Contest may be flying at any time during the hours of daylight from August 24, 1931, until the date of the Contest, within the area bounded as follows :—

Straight lines joining Yarmouth Pier, Lymington Pier and Netley Castle. High-water mark between Netley Castle and Hamble Spit. Straight lines joining Hamble Spit, Horsea W/T Station, Baffin's Pond (about 1½ miles south of Portsmouth Aerodrome) and Havant Railway Station. The railway lines between Havant and Chichester railway stations. Straight lines joining Selsey Bill, Culver Down W/T Station and Egypt Point Lighthouse. High-water mark between Egypt Point Lighthouse and Yarmouth Pier.

Pilots of civil aircraft are requested to avoid flying over this area.

Notice to Airmen Series A, No. 17 of 1931, should be regarded as cancelled as from August 24, 1931.

## IMPORTS AND EXPORTS

AEROPLANES, airships, balloons and parts thereof (not shown separately before 1910).

For 1910 and 1911 figures see FLIGHT for January 25, 1912.

For 1912 and 1913, see FLIGHT for January 17, 1914.

For 1914, see FLIGHT for January 15, 1915, and so on yearly, the figures for 1930 being given in FLIGHT, January 16, 1931.

	Imports.		Exports.		Re-exports.	
	1930.	1931.	1930.	1931.	1930.	1931.
Jan.	2,987	7,965	147,935	142,596	—	1,074
Feb.	2,460	3,303	226,049	110,587	1,000	1,293
Mar.	744	5,615	156,098	83,088	802	3,441
April	2,959	2,216	213,390	213,401	79	530
May	11,706	1,964	158,460	275,382	2,550	198
June	15,029	6,780	252,443	78,298	1,060	361
July	14,216	1,790	170,594	177,006	938	131
	50,101	29,633	1,324,969	1,080,358	6,429	7,028

## AERONAUTICAL PATENT SPECIFICATIONS

*Abbreviations*: Cyl. = cylinder; i.c. = internal combustion; m. = motors. The numbers in brackets are those under which the Specification will be printed and abridged, etc.)

### APPLIED FOR 1930

Published, August 20, 1931.

13,437.	ARENS CONTROLS, LTD and F. A. CLARKE. Flexible power-transmission devices. (353,542.)
14,184.	AUTOMATIC PROPELLER CO., LTD. Screw propellers. (353,560.)
16,870.	J. SZYDLOWSKI. Two-cycle air-cooled aircraft motors. (353,608.)
21,577.	DR. C. VON HOFE and A.-G. C. P. GOERZ OPTISCHE ANSTALT. Devices for determining speed of aircraft. (353,679.)
23,563.	CHEVRON MOTOR CORP. Radial-cyl. i.c. engines. (353,716.)
23,911.	CURTISS-WRIGHT FLYING SERVICE, INC. Method of and apparatus for instructing in aeronautical theory and practice and testing the performance of an aerial vehicle. (353,719.)
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